



RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

September 21, 2018

Sent by Email

Mr. Sid Stroud
Manager, Mine Compliance
Luminant
Environmental Services
6555 Sierra Drive
Irving, TX 75039

RE: Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan

Dear Mr. Stroud:

By letter dated July 31, 2017, you submitted the subject application to revise the postmine topography of portions of the H Area and to request approval of a proposed H-Area reclamation plan, which includes general design plans for H-03 Permanent Impoundment and a Form SMRD-1C updating the mailing addresses and listing of individuals who are authorized to act on behalf of Luminant. You provided a \$500 revision-application filing fee with the initial application.

In response to my letter dated December 5, 2017, in which I notified you that I had determined that the application was a significant revision to the approved permit under 16 TEXAS ADMIN. CODE §12.226(a), you provided additional information by letter dated February 15, 2018. In this letter you requested that my decision regarding application significance be rescinded. A meeting was held between Luminant and Staff on May 1, 2018. By memorandum dated July 18, 2018, I transmitted the pertinent application information to the Commission's Office of General Counsel (OGC) requesting a legal opinion regarding application significance with respect to processing. I supplemented this information by memorandum dated August 9, 2018, wherein I transmitted to OGC the additional information submitted by Luminant on that same date. David Cooney, Staff Attorney with OGC, provided his legal opinion by memorandum dated August 31, 2018 (enclosed).

In this legal opinion, Mr. Cooney describes the requirements for permit processing under 16 TEXAS ADMIN. CODE §12.226(a) and the criteria under which a determination of application significance has historically been applied by the SMRD Director. Mr. Cooney further narrowed down the issues to those pertinent specifically to Revision Application No. 34, identifying that, because Luminant is the landowner of the H Area tracts, the important issues as they pertain to a significance determination are the potential environmental effects of the proposed changes. The essential conclusion of the opinion is that, for a legally defensible determination to be made that the revision application is not significant, the Director must have specific facts that enable him to conclude that the degree of impact expected to be brought about by the proposed changes is consistent with the impacts anticipated from the currently approved plan. Mr. Cooney further indicates that decisions of significance in this regard must be based on credible information that addresses the pertinent environmental impacts under review.

Mr. Sid Stroud
September 21, 2018
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In my significance letter dated December 5, 2017 (as attached List B), I noted several issues with the changes proposed in Revision No. 34, describing the needed information that has not been provided in the application. Responses to these concerns will ensure that I have all information necessary to support a legally defensible determination of non-significance.

Processing of the application, which was suspended as noted in our January 19, 2018, letter pending resolution of the noted issues that render the application deficient and preclude processing of the application as an administrative revision, will proceed once a response is provided to these issues, or if you inform me that you wish to proceed with processing the application as a significant revision. Please contact me or Mr. Martin Alvarez, Staff's coordinator for review of this application, should you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to be 'J. Denny Kingsley', with a stylized, looping design.

J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

JDK/MA/TGW/rv
Enclosures
File Reference No. 1721314

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application ~~Incomplete~~ or Deficient
September 21, 2018 (originally noted on January 19, 2018)

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Prologue

Staff notes that the information in the list below does not necessarily constitute an all-inclusive list of information that appears to be missing from or deficient in this application, because the lists stem from a preliminary, rather than an exhaustive, review. In List B, Staff describes concerns suggesting that the application is deficient, to assist Luminant in its preparation of a supplement.

Staff values Luminant's input to authenticate these lists and therefore requests that Luminant set up a meeting to address and verify which items are necessary for completeness.

List B. Concerns that Appear to Render the Application Deficient

- B-1. Luminant does not indicate why it proposes to leave an approximately 120-ft high temporary unsuitable-material stockpile (northwest of proposed H-03 Permanent Impoundment) as a permanent structure in Zone 1.
- B-2. Revised operation plan sheets (Plates with a "139-1-" prefix) are required to reflect changes to the operation plan in the H Area resulting from this proposed H-Area reclamation plan.
- B-3. The proposed reclamation plan does not meet/include information required as per §12.384(b)(1), §12.384(b)(2), §12.145(b)(3), §12.363, etc.
- B-4. Mining has ceased; therefore, the statement in the last paragraph of page 139-E-2 under the *H-03 Pond* description should be corrected.
- B-5. The last paragraph of page 139-E-2 under the description of the *Zone 3 Suitable Material Leveling* should refer to Zone 3 instead of Zone 2. Additionally, please note that there are significant changes to Table 139(b)-1 (*Slope Comparison Table*) compared to the approved table.
- B-6. §12.139 Luminant provides general design information for the proposed H-03 Permanent Impoundment in Table 139(b)-3, *Permanent Impoundment Schedule*. Additionally, in the legend on Plate 147-1, *Postmine Land Use Map*, Luminant identifies the H-01 Treatment Pond and H-01 Sedimentation Pond as proposed developed water resource structures. In the SMRD's records, these two structures (H-01 Treatment Pond and H-01 Sedimentation Pond) are approved temporary structures. Please explain and/or provide detailed design plans/calculations as necessary.
- B-7. §12.139 According to revised Table 139(b)-3, detailed design plans for H-01 Treatment Pond and H-01 Permanent Impoundment will be submitted in 2020, and detailed design plans for H-03 Permanent Impoundment will be submitted in 2019. Luminant indicates that activities associated with the H-Area reclamation plan will be complete by March 1, 2019. No information is provided in the revised portions of section .139 to describe the impacts of the proposed reclamation strategy on timing of submittal of detailed design plans for H-01 Permanent Impoundment H-01 Treatment Pond. As part of the proposed H-Area reclamation plan, the date of submittal of design plans has not been provided. Staff needs

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
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this information to determine how this plan element coincides with the rest of the reclamation schedule.

- B-8. §12.139 Revised Table 139(a)-2 (*Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone*), Table 139(a)-3 (*Progressive Characteristics for Backfilling and Grading (B&G) Time Frame and Distance Variances*) that includes a reference to Appendix 139-E for the proposed H-Area Reclamation Plan, and Table 139(b)-1 (*Primary Sedimentation Control Structures and Impoundment Schedule*) that includes revised pond information, are required.
- B-9. §12.139 Luminant indicates on *Table 139 E-2* that there are 379,300 yd³ of “*Recoverable Suitable Material*” in suitable material H-Area Stockpile No. 1. In the text on page 139-E-1, Luminant indicates that this same stockpile has a maximum storage capacity of 318,000 yd³. Additionally, on page 139(b)-4 of the approved permit (Supplemental Document No. 4), Luminant indicates that “...[i]t is estimated that approximately 318,000 loose cubic yards of suitable material will be placed in the suitable material stockpile.” An explanation is needed for the origin of the additional 61,300 yd³ of suitable material and why this material was placed in a stockpile not designed nor bonded for this material quantity.
- B-10. §12.139 Luminant indicates in *Table 139 E-2* that there are 178,204 yd³ of “*Recoverable Suitable Material*” in suitable-material H-Area Stockpile No. 2; however, text on page 139-E-1 indicates that suitable-material H-Area Stockpile No. 2 has a maximum storage capacity of 430,000 yd³. An explanation is needed describing where the suitable material expected to be stored in this stockpile was placed.
- B-11. §12.139 Review of Tables 139 E-1 and 139 E-2 indicates that, for Zone 2 and for Zone 3, adding the “*Required Suitable Material*” (Table 139 E-2) to the suitable material to be moved (Table 139 E-1) equals the “*Recoverable Suitable Material*” in Table 139 E-2. Staff believes this should also be the case for Stockpile Nos. 1 and 2. In addition, Staff notes that the total cubic yards listed in Table 139 E-2 appear to be incorrect.
- B-12. §12.139 Luminant classifies the material that will remain in Zone 2 and in Zone 3 as “*Suitable Material*” in an affected area that was not mined during progression of the active pit. Luminant provided no details regarding the potential ripping and dinking of Zone 2 and Zone 3 following suitable material removal, nor what it plans to do with the excess stockpile material. Staff considers that Luminant’s proposed ripping and dinking plan must be no less intensive than that approved for the Oak Hill Mine, Permit No. 46C, Revision No. 40.
- B-13. §12.139 Information needs to be provided to clarify how Luminant determined the amount of recoverable suitable material in each zone and in each stockpile as listed in Table 139 E-2, including the depth of removal.
- B-14. §12.139 Luminant indicates in Appendix E that mobile equipment will move approximately 750,000 cubic yards of subgrade material from Zone 1; however, it is not clear where the material will be placed. Additionally, an explanation has not been provided to justify the proposed start date of the activities proposed in the reclamation plan.

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application ~~Incomplete or Deficient~~
September 21, 2018 (originally noted on January 19, 2018)

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- B-15. §12.139 Luminant did not provide physicochemical data for all materials considered for placement in the postmine top four feet. Additionally, no geologic cross sections were provided for Zones 2 and 3. Staff considers that a cross section extending through all locations, to include the stockpiles, are appropriate.
- B-16. §12.139 Luminant is apparently proposing to cover the approximately 120-foot high temporary stockpile, which contains acid/toxic-forming materials from which acidic drainage is flowing to the nearby pit, with approximately four (4) feet of suitable material. Staff considers that this proposal is counter to requirements at §12.386(4) that acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution. During a recent site visit, the Director viewed the area of the stockpile and no discernable acidic drainage seeps were identified. Luminant is requested to provide a copy of the report from its consultant demonstrating the lack of acidic drainage from the stockpile in the next supplement as part of its response to this comment.
- B-17. §12.139 Review of available aerial photographs indicates the presence of rills and gullies on the approximately 120-foot high stockpile. On Plates 139-2-1, 139-3-1, and 147-1, Luminant depicts the existing stockpiles but does not provide a clear depiction of the proposed postmine contours. Luminant has not demonstrated that rills and gullies will not disrupt the postmine land use or the reestablishment of the vegetative cover or cause or contribute to a violation of water-quality standards for receiving streams as required at §12.389(b).
- B-18. §12.145 It is unclear whether a revised reclamation cost estimate is required considering the activities/changes described in this revision application.
- B-19. §12.150 Luminant does not appear to have provided information concerning the final disposition of three diversions constructed in the area. One diversion (H-01 Diversion) routes water around the northeastern edge of H-Area into H-01 Permanent Impoundment. The other two diversions (H-02 Diversion and H-03 Diversion) route water around the southwestern edge of H Area into H-01 Permanent Impoundment.



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

MEMORANDUM

Railroad Commission
of Texas
RECEIVED

AUG 31 2018

TO: J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

Surface Mining Division

FROM: David Cooney, Staff Attorney
Office of General Counsel

A handwritten signature in dark ink, appearing to be "DC", written over the printed name "David Cooney".

RE: Luminant Mining Company LLC (Luminant)
Monticello Thermo Mine, Permit No. 5G
Revision No. 34, H Area Reclamation Plan
Request for Legal Opinion on Determination of Significance

DATE: August 31, 2018

On August 1, 2017, Luminant filed Revision No. 34 to Permit No. 5G, the Monticello Thermo Mine. By letter dated December 5, 2017, SMRD determined that the application was a significant revision to the approved reclamation plan under §12.226(a)(1) of the Regulations, and notified Luminant that it needed to submit additional application copies, a Form SMRD-1C, and a draft public notice, upon which Staff would make a determination of administrative completeness. By letter dated January 11, 2018, Luminant provided the requested information and, by letter dated January 19, 2018, Staff determined that additional technical information was needed to meet administrative completeness requirements under the Regulations.

By letter dated February 15, 2018, Luminant filed a request to rescind the earlier significance determination. On May 1, 2018, SMRD and Luminant Staff met to discuss the issues regarding Revision 34 and the significance determination. During that meeting, Luminant made several points to try to persuade Staff that Revision 34 does not constitute a significant change to the approved operation and reclamation plans. The decision to process Revision 34 as significant trigger the requirements of 16 TAC §§12.207 - 12.221 (relating to Review, Public Participation, and Approval of Permit Applications and Permit Terms and Conditions), and 16 TAC

§12.222 and §12.223 (relating to Administrative and Judicial Review of Decisions by Commission on Permit Applications); in short, requiring public notice and opportunity for hearing.

By memo dated July 18, 2018, SMRD requests a legal opinion on whether Application Revision No. 34 should be processed as a “significant revision” as the term has come to be employed in SMRD practice, or whether Application Revision No. 34 may be processed administratively. Based on SMRD practice, a determination that the Revision may be processed administratively would eliminate the applicability of §§12.207 - 12.221, §12.222 and §12.223.

The Permit Revision Regulation

With portions relevant to this memo underlined, and key terms italicized, 16 TAC §12.226 provides:

(a) A revision to a permit shall be obtained:

(1) for changes in the surface coal mining or reclamation operations described in the original application and approved under the original permit, when such changes constitute a *significant departure* from the method of conduct of mining or reclamation operations contemplated by the original permit. Significant departures would include any change in permit area, mining method or reclamation procedure, which would, in the opinion of the Commission, significantly change the effect the mining operation would have on either those persons impacted by the permitted operation or on the environment;

or

(4) as otherwise required under the regulatory program.

(b) The application for revision shall be filed in accordance with the following:

(1) the permittee shall submit the application to the Commission within the time provided for in §12.106(b)(3) of this title (relating to Permit Application Filing Deadlines);

(2) any application for a revision which proposes *significant alterations* in the operations described in the materials submitted in the application for the original permit under §§ *** 12.139 - 12.154 of this title (relating to *** Surface Mining Permit Applications--Minimum Requirements for Reclamation and Operation Plan) *** shall, at a minimum, be subject to the requirements of §§12.207 - 12.221 of this title (relating to Review, Public Participation, and Approval of Permit Applications and Permit Terms and Conditions), and §12.222 and §12.223 of this title (relating to Administrative and Judicial Review of Decisions by Commission on Permit Applications).

(B) Notice and hearing. Notice as for a new permit application is required whenever new landowners will be affected. If objections to the revision are received and a hearing is requested, the Commission shall schedule and hold a public hearing as required for an original application.

(c) The Commission shall approve or disapprove the complete application for revision within 90 days from receipt in accordance with the requirements of §§12.207 - 12.221 of this title (relating to Review, Public Participation, and Approval of Permit Applications and Permit Terms and Conditions) and the Act.

SMRD Practice

Upon reading the regulation it is understandable to ask how a process of administrative approval of permit revision applications came to be in the first place, because §12.226(a)(1) rule requires a permit revision when the proposed changes constitute a *significant departure* from the method of conduct of mining or reclamation operations contemplated by the original permit. Thus, it seems that the very filing of an application for a permit revision is an admission that the proposed

change(s) is/are “significant.” However, the regulation does not prohibit an application from being filed for revisions that are not “significant,” and the SMRD practice is that all permit revisions are initiated with the filing of an application.

Early in the life of the SMRD program it became clear that engaging in the full notice and hearing process for approval of every single revision application would be unworkable. Therefore, a procedure for administrative processing of certain revision applications developed, and criteria for distinguishing between applications that could be processed administratively from applications that triggered the notice and hearing process (i.e. the applicability of §§12.207 - 12.221, §12.222 and §12.223) were established using fundamental principles from §12.226.

SMRD identifies revision applications that require notice and hearing as “significant” revisions, and, to determine whether the revision application must go through the notice and hearing process, looks to the part of §12.226(a)(1) that states a change is significant if it would, “in the opinion of the Commission, significantly change the effect the mining operation would have on either those persons impacted by the permitted operation or on the environment.” Subsection (b)(2)(B) drives home how important the “effect of mining on persons impacted” factor is in determining whether a revision application should go through the notice and hearing process. It specifically requires notice as for a new permit “whenever *new landowners* are affected,” and goes on to state, “If objections to the revision are received and a hearing is requested, the Commission *shall* schedule and hold a public hearing as required for an original application.” Thus, the practice of SMRD is to initiate the notice and hearing process on a permit revision application that would cause the mining operation to:

- Affect persons impacted by the permitted operation in a material way, or
- Affect the environment impacted by the permitted operation in a material way.

Factors that have been used to determine whether an application should be processed administratively or declared significant include whether the proposed changes are reasonably considered to be within or outside of what was contemplated in the public notice for the approved permit. If it would be reasonable to conclude an area was contemplated by the original notice, then it would be reasonable to conclude it is not significant. And the opposite is true. For example, a revision where the surface area

of a pond was proposed to change substantially (i.e., from 10 acres to 100 acres) was determined to be significant under 12.226. Another example could be a material handling plan change from using haulback for the top four feet to using mixed overburden for the top four feet, which has been characterized as significant. Each determination, however, is fact-specific and driven by a wide range of factors, some of which could be material in one case, but not material in another.

Revision No. 34

Revision 34 primarily seeks to change (increase) post mine slopes for 75 acres in the H area from what was approved in Revision 30. Attachment A is a figure showing currently approved slopes in the H area; attachment B shows the proposed slopes. Two key elements of the revision application include leaving an unsuitable material stockpile in place and covering it with four feet of topsoil to build a hill, rather than using the stockpile to fill in the final mine pit, and leaving the final mine pit in its current configuration as a water body instead of filling it in and sloping is as shown in Attachment A.

We are asked to provide a legal opinion on whether these proposed changes, in the context of the entire mine, materially affect persons impacted by the permitted operation, or materially affects the environment affected by the permitted operation.

Applicable Legal Standard

One aspect of the legal framework worthy of note is the provision in Subsection 12.226 (b)(2)(B), which specifically mandates notice as for a new permit “whenever new landowners are affected,” and requires the Commission to schedule and hold a public hearing as required for an original application if objections to the revision are received and a hearing is requested. This is the only provision that directly states a hearing shall be held. The question then becomes whether or not the Commission is correct to apply 12.226 in a manner that distinguishes between revision applications that require notice and hearing and those that do not in cases where there is *not* a new landowner affected who has requested a hearing. Generally, an agency will be given deference as to how it interprets and applies its regulations, and so long as there is a reasonable basis in law and fact for the agency decision, the law will consider the decision an appropriate exercise in agency discretion. The legal question in cases of agency

decision-making is whether the agency properly exercised its discretion in making the decision.

Applying the Rules to Revision 34

It is accepted that Luminant, the mine operator, is the only landowner affected by Revision 34, so there are no persons that will be materially affected by the revision.

The sole subject of inquiry, therefore, in determining whether or not it would be a proper exercise of discretion to treat Revision 34 as “significant” under 12.226(a) is whether or not the revision will, in a material way, affect the environment impacted by the mining operation. If we review how implementing the revision will affect the environment and can point to specific facts that lead the conclusion that the environment will not be materially affected by the revised mining/reclamation, then we can conclude the revision is not significant and be confident the conclusion will survive legal challenge. If on review specific facts lead the conclusion that the environment will be affected by the revised mining/reclamation in a material way, then we can conclude the revision is significant.

The Specific Facts

Anticipating the nature and degree of environmental impact is a technical determination. If the persons responsible for evaluating the impact can point to specific facts that lead them to conclude the degree of impact expected to be brought about by mining/reclamation activities under Revision 34 is consistent with the of environmental impact expected to be brought about by the approved plan, then a determination that Revision 34 is not significant is legally defensible. These conclusions should be based on credible information that addresses the particular environmental impact under review.

Some of the specific subjects that have been raised include whether or not water is seeping from the stockpile which adjoins the proposed final pit, whether water could seep from the stockpile in the future, and the quality of the water that may emanate from the stockpile. A recent report has concluded water is not seeping

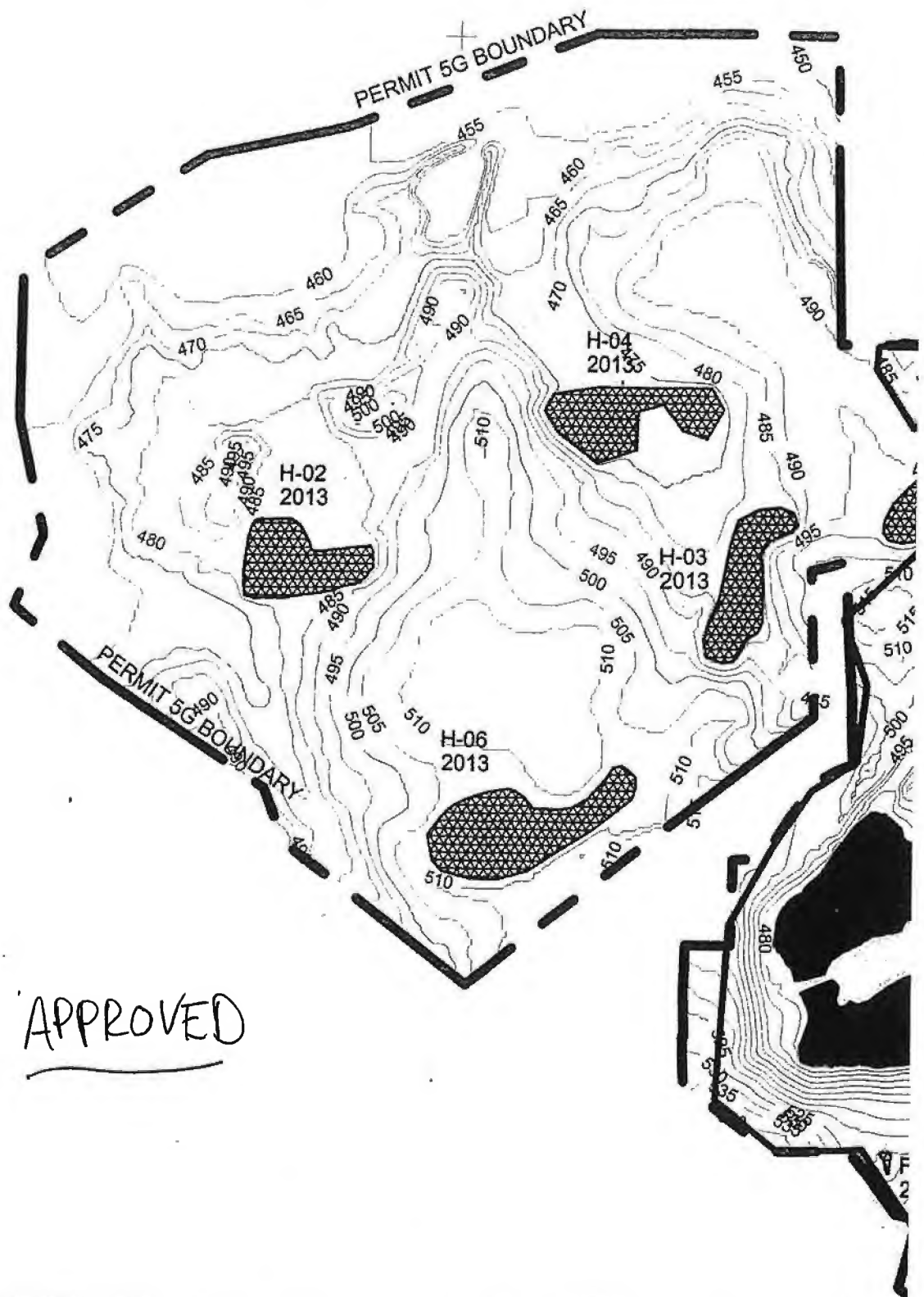
from the stockpile. If staff is comfortable that the stockpile will be configured in a manner, and is made up of material such that the risk of an unacceptable seep is generally similar to, give or take a modest degree, the risk posed under the approved reclamation plan, that would support a determination the revision is not significant.

Another aspect of the stockpile that seems to warrant consideration is the presence of rills and gullies on the stockpile. While it is understood that four feet of suitable topsoil will be added to the final grade of the stockpile, the concern about rills and gullies disturbing post mine land use or the reestablishment of vegetative cover seems like it should be addressed in with sufficient detail to allow the staff to make a judgement on environmental impact as revised and as approved. If the impact is similar, then a determination of the revision is not significant is legally sustainable.

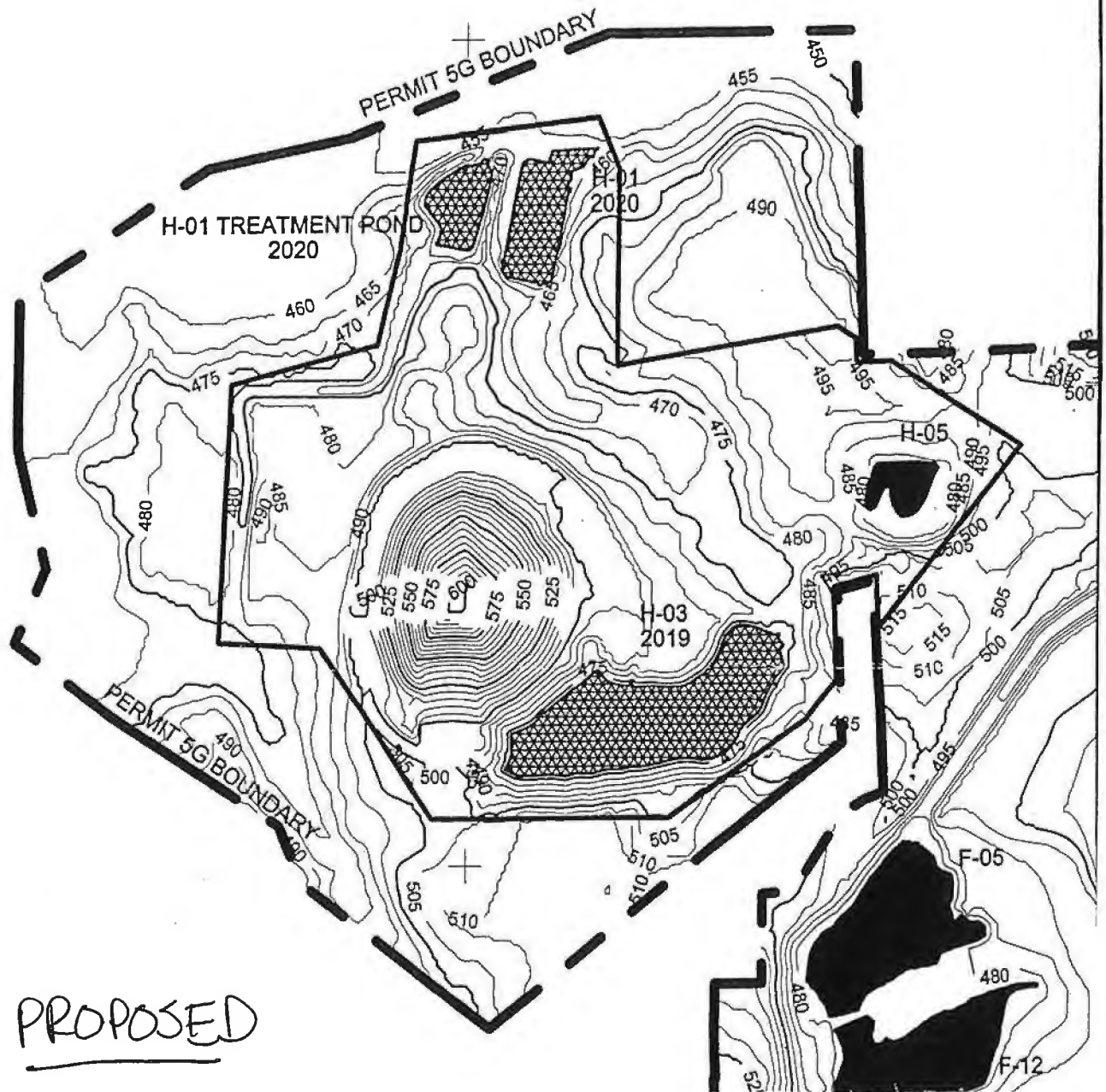
Conclusion

If Staff has the information necessary to conclude, and does conclude, that the environmental impact of mining/reclamation activity under Revision 34 is generally similar to the environmental impact of mining/reclamation activity as approved, and can point to specific, credible facts that lead Staff to the conclusion, then a determination that revision 34 is not significant will be legally sustainable.

ATTACHMENT A



ATTACHMENT B





RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

MEMORANDUM

TO: Mr. David Cooney, Staff Attorney
Office of General Counsel

FROM: J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

RE: Luminant Mining Company LLC (Luminant)
Monticello Thermo Mine, Permit No. 5G
Revision No. 34, H Area Reclamation Plan
Request for Legal Opinion on Determination of Significance
Submittal of Additional Relevant Information

DATE: August 9, 2018

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DOCKET SERVICES
RAILROAD COMMISSION
OF TEXAS

By memorandum on July 18, 2018, I requested a legal opinion with regard to the processing significance of changes proposed to the H-Area reclamation plan in Luminant's August 1, 2017, submittal of Revision No. 34 to Permit No. 5G, the Monticello Thermo Mine. Pursuant to concerns described in the meeting with Luminant representatives held on May 1, 2018, in which you participated, Luminant recently, submitted, by letter dated August 8, 2018, a memorandum dated May 14, 2018, from its environmental consultant, Pastor, Behling & Wheeler, LLC, containing an assessment of the ground-water hydrologic conditions surrounding the adjacent unsuitable-material stockpile and contemplated postmine H-03 Pond. I request that you consider this additional information as you form your legal opinion on whether Application No. 34, as proposed, does or does not meet the requirements of §12.226(a)(1). A copy of the indicated correspondence is attached.

As I also recommended previously, please contact me, Tim Walter, Manager of Team 1 of the SMRD's Applications and Permits Section, or Martin Alvarez, Staff coordinator for review of the application, should you wish to discuss the application contents, its history, or associated correspondence.

A handwritten signature in blue ink, appearing to be "J. Denny Kingsley".

J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

JDK/tgw
Attachment
File Reference No. 1721314

xc: Alex Schoch, General Counsel



Sid Stroud
Manager, Mine Compliance
Environmental Services
sid.stroud@luminant.com

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Railroad Commission
of Texas
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AUG 09 2018

August 08, 2018

Mr. J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711-2967

Surface Mining Division

RE: Luminant Mining Company LLC
Monticello Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan
Assessment of Hydrologic Conditions at Proposed H-03 Pond Area

Dear Mr. Kingsley:

Revision No. 34 to Permit No. 5G was submitted to the Commission to propose a H-Area Reclamation Plan concept being planned collaboratively with the City of Sulphur Springs ("City") and the Railroad Commission of Texas ("Commission"). On December 5, 2017, the Commission informed Luminant that Revision No. 34 was determined to be a significant revision because "...the proposed changes constitute a significant departure from the approved reclamation operations in accordance with §12.226(a)(1)." On January 19, 2018, the Commission informed Luminant that Revision No. 34 was determined to be "incomplete" and "not accepted for filing at [that] time." By letter of February 15, 2018, Luminant requested reconsideration of the earlier determinations of significance and incompleteness and find that Revision No. 34 may be deemed complete and processed administratively.

On May 01, 2018, Luminant and the Commission met to discuss technical questions relevant to the Commission's review. This meeting was productive and comprehensive. However, some uncertainties remained regarding the stockpile which adjoins the final pit, and Staff's concern over a possible seep stemming from the stockpile. To further investigate these concerns, Luminant requested Keith Wheeler, Principal Hydrogeologist for Pastor, Behling & Wheeler, LLC (now "Golder Associates Inc."), to do a field assessment of the site.

During your visit of the Thermo Mine on August 8, 2018, you personally observed conditions at the H-Area, including the stockpile and the highwall-side groundwater seeps feeding the final pit area. We discussed, in general terms, the findings from Mr. Wheeler's May 14, 2018 assessment, which I have attached herein at your request. Luminant also offers the following in combination with Mr. Wheeler's attached report:

- During the May 1, 2018 meeting, Staff expressed concern regarding a seep from the stockpile and its influence on water quality. Mine site personnel were unaware of any seeps emanating from the stockpile and, to-date no seeps have been identified associated with this stockpile. Mr. Wheeler's assessment confirmed that there are no seeps from the stockpile and that the native groundwater entering the pond along the pit slopes is of good quality.

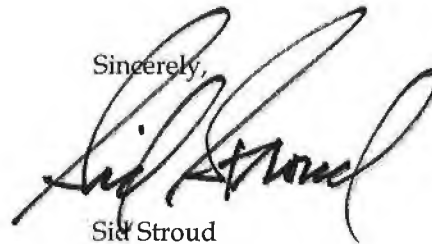
August 8, 2018

- Staff suggested at the May 1, 2018 meeting that the placement of the "unsuitable" stockpile on top of native soil possibly constituted a failure to follow the approved handling plan. We believe it is very reasonable to find Luminant followed the approved plan, for these reasons:
 - All material above the top seam is approved as suitable. However, Luminant segregated and stockpiled the shallow oxidized materials for use in final reclamation and identified these stockpiles with the nomenclature of "suitable" to distinguish this material from those deeper in the overburden column and control the known quality of stockpiles that were to be used for the final top four feet.
 - The 2 million cubic yard "Stockpile" and the "H-Area Suitable Material Stockpile No. 1 and No. 2" are shown on Plate 139-1-6 of the approved 5G Renewal. These stockpiles were planned, approved by the Commission, and derived from the H-Area box cut years ago. Only a small amount of material was placed in Stockpile #2 and it was incorporated into reclamation in about 2012.
 - After regrading of the temporary overburden stockpile to grades proposed in Rev 34, the suitable stockpile No. 1 will be utilized to put in place the final four-feet of cover. After completion of subgrade and suitable material placement, initial soil samples will be taken as is routine for further demonstration of postmine soil quality.

We hope this information is helpful in making your determination regarding our February 15 request for reconsideration, and that the Commission find that Rev 34 should be processed administratively.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Sid Stroud", written over the word "Sincerely,".

Sid Stroud

SS/SS/tg

Attachment



*Consulting Engineers
and Scientists*

PASTOR, BEHLING & WHEELER, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434

TECHNICAL MEMORANDUM

TO: Luminant Mining Company LLC (Luminant)
FROM: Keith Wheeler, P.G. – Pastor, Behling & Wheeler, LLC
DATE: May 14, 2018

RE: Assessment of Hydrologic Conditions at H-03 Pond and Surrounding Area
Thermo Mine, Hopkins County

As requested, I (Keith Wheeler) visited the Thermo Mine on May 9, 2018 to assess the hydrologic conditions at the H-03 Pond and surrounding terrain, including a nearby soil stockpile. It is my understanding that RRC staff expressed concerns to Luminant during a recent meeting about acid seepage emanating from the soil stockpile, draining into the H-03 Pond, and lowering the pH of the pond. The primary purpose of my investigation was to: 1) identify and characterize the nature of any seeps in the area and 2) determine the likely cause of the low pH conditions in the H-03 Pond.

SUMMARY OF SITE INSPECTION AND OBSERVATIONS

During the site visit, I was accompanied by Luminant employees from the Monticello Mine (Mr. Monty Ward and Mr. Bill Mason). An aerial photograph showing the locations of the H-03 Pond and nearby soil stockpile is provided as Figure 1. Photographs taken during the site visit are provided in Attachment A.

A pH measurement of 3.9 was taken from the pond at the approximate location shown on Figure 1. According to Luminant personnel, previous pH measurements from the pond had ranged from about 3.9 to 5.5, with the higher pH values coinciding with higher pond levels. The pond level was relatively low during the site visit.

Groundwater seeps were observed emanating from some erosional features along the northwestern slopes adjacent to the pond. The seep origin was about halfway up the unreclaimed slopes. No seepage was observed coming from the southeastern corner of the soil stockpile. Seep photos are provided in Attachment A. Two seep pH measurements were taken at the approximate locations shown on Figure 1. A pH of 6.4 was measured in the seepage closest to the pond. Closer to the seep source, the seepage had a pH of 6.7. We were not able to walk the entire perimeter of the pond due to access issues, so other similar seeps may exist. Luminant personnel had driven the entire perimeter of the soil stockpile the previous day and not observed any seeps emanating from its base.

Abundant lignitic material was observed on the ground in the unreclaimed area surrounding the pond (see photos in Attachment 1). Exposed lignitic material and seams are also likely in contact with pond water.

REVIEW OF BASELINE GROUNDWATER INFORMATION

The closest overburden baseline groundwater well to the H-03 Pond is TLT-13-OB (see Figure 1). As reported in Section 128 of the Thermo Mine Permit, the water table was encountered less than five feet below ground surface when measured during the baseline period in 2005 (Table 128-4). The groundwater elevations ranged from an elevation of about 490 to 492 feet above mean sea level. Table 128-5 in Section 128 shows that the pH of TLT-13-OB ranged from about 6.7 to 7.1, indicating that the shallow overburden groundwater system has a neutral pH.

DISCUSSION OF FINDINGS

My answers to the following question are based on my recent site visit, discussions with Luminant personnel, review of baseline reports, and professional experience.

Question 1. What is causing the low pH conditions in the H-03 Pond?

The pH of the H-03 Pond appears to be low due, to a minor extent, to surface runoff coming into contact with the exposed lignitic material in the unreclaimed material surrounding the pond and, to a larger extent, the exposed seams and associated carbonaceous materials inside the pond.

Question 2. Is the groundwater seepage into the pit lowering the pond pH

No, the native groundwater seeping into the pond has a neutral pH and, if anything, is raising the pH of the pond. The seepage observed during my site visit is consistent with the presence of shallow, neutral pH groundwater identified in the area during the baseline studies.

Question 3. Are low pH seeps emanating from the soil stockpile?

No, low pH seeps have not been observed at the base of the soil stockpile.

Question 4. Is the pH of the H-03 Pond likely to improve after the area is reclaimed?

It is my understanding that Luminant will cover the exposed lignitic material with four feet of suitable material in accordance with the approved reclamation plan. I also understand that Luminant typically uses suitable material to cover the sides of the pit at least 10 feet below the normal pool level. Following these reclamation activities, it is likely the pH of the H-03 Pond will increase. Other ponds at the Thermo mine exhibit near-neutral pH conditions following reclamation activities.

Please call me at (512) 671-3434 if you have any questions about the contents of this technical memorandum or would like to discuss my findings in more detail.

Keith Wheeler
Principal Hydrogeologist
Pastor, Behling & Wheeler LLC

Texas Geoscience Firm No. 50248



FIGURE 1: AERIAL IMAGE OF H-03 POND AND SURROUNDING AREA (THERMO MINE)



ATTACHMENT A

PHOTOGRAPHS

Attachment A

Photographs of H-03 Pond and Surrounding Area at the Thermo Mine (Photographs taken May 09, 2018)



H-03 Pond. pH reading of 3.9 was taken near shoreline.



Groundwater seepage flowing into H-03 Pond

Attachment A

Photographs of H-03 Pond and Surrounding Area at the Thermo Mine (Photographs taken May 09, 2018)



Groundwater seepage near H-03 Pond, pH = 6.4



Groundwater seepage near source area, pH = 6.7

Attachment A

Photographs of H-03 Pond and Surrounding Area at the Thermo Mine (Photographs taken May 09, 2018)



Lignitic material at ground surface near H-03 Pond



Photograph of Soil Stockpile located northwest of H-03 Pond.



RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

MEMORANDUM

TO: Mr. David Cooney, Staff Attorney
Office of General Counsel

FROM: J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

RE: Luminant Mining Company LLC (Luminant)
Monticello Thermo Mine, Permit No. 5G
Revision No. 34, H Area Reclamation Plan
Request for Legal Opinion on Determination of Significance

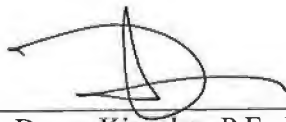
DATE: July 18, 2018

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RECEIVED
RAILROAD COMMISSION
OF TEXAS

On August 1, 2017, Luminant filed Revision No. 34 to Permit No. 5G, the Monticello Thermo Mine. By letter dated December 5, 2017, I determined that the application was a significant revision to the approved reclamation plan in accordance with §12.226(a)(1), and notified Luminant that it needed to submit additional application copies, a Form SMRD-1C, and a draft public notice, upon which Staff would make a determination of administrative completeness. By letter dated January 11, 2018, Luminant provided the requested information and, by letter dated January 19, 2018, Staff determined that additional technical information was needed to meet administrative completeness requirements under the Regulations.

By letter dated February 15, 2018, Luminant filed a request to rescind the earlier significance determination. SMRD and Luminant Staff were subsequently able to schedule and hold a meeting to discuss the issues regarding revision significance on May 1, 2018, in which you participated. During that meeting, several compelling points were made to demonstrate that the proposed revision does not constitute a significant change to the approved operation and reclamation plans. Prior to providing Luminant with my final decision on processing of the application, and pursuant to that meeting and discussion, I am requesting that you provide to me a legal opinion on whether Application No. 34, as proposed, meets the requirements of §12.226(a)(1) and should be processed as a significant revision requiring public notice and opportunity for hearing. Copies of the indicated correspondence are attached.

Please contact me, Tim Walter, Manager of Team 1 of the SMRD's Applications and Permits Section, or Martin Alvarez, Staff coordinator for review of the application, should you need additional information regarding the application contents or to discuss its history and the attached correspondence.


J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

JDK/tgw
Attachments
File Reference No. 1721314
xc: Alex Schoch, General Counsel



Sid Stroud
Manager, Mine Compliance
Environmental Services
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T 214.875.9129
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Railroad Commission
of Texas
RECEIVED

FEB 16 2018

February 15, 2018

Mr. J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711-2967

Surface Mining Division

RE: Luminant Mining Company LLC
Monticello Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan

Dear Mr. Kingsley:

Luminant Mining Company LLC ("Luminant") submitted Revision No. 34 to Permit No. 5G to the Railroad Commission of Texas ("Commission") by letter of July 31, 2017, proposing approval of a comprehensive reclamation plan for the final pit in H-Area. This application superseded Revision No. 29 (Request for Additional Time to Complete Backfilling and Grading, 61 acres, H-Area) that was approved July 13, 2016. Revision No. 34 was the culmination of extensive pre-application discussions with the Commission, including agency leadership and Surface Mining and Reclamation Division ("SMRD") Staff, regarding a reclamation concept being planned collaboratively with the City of Sulphur Springs ("City"). On December 5, 2017, the Commission informed Luminant that Revision No. 34 was determined to be a significant revision because "...the proposed changes constitute a significant departure from the approved reclamation operations in accordance with §12.226(a)(1)." On January 19, 2018, the Commission informed Luminant that Revision No. 34 was determined to be "incomplete" and "not accepted for filing at [that] time."

Luminant believes that these determinations ("significant" and "incomplete") are unjustified and unnecessary. Below, Luminant provides the chronology of the extensive pre-application consultation between Luminant, the Commission, and the City, who is such an integral part of this particular reclamation planning process. Based on these circumstances and a clear reading of the Commission's Regulations, Luminant respectfully requests that you reconsider SMRD Staff's determinations of significance and incompleteness of Revision No. 34.

Chronology

1. **December 16, 2015** - Meeting with SMRD Director John Caudle to discuss Thermo reclamation planning. Among concepts being evaluated was the use of a Thermo final pit for municipal waste landfill by the City.
2. **March 24, 2016** - Luminant formally notified Hearings Examiner Randall Collins that coal mining operations at Thermo Mine 5G have permanently ceased. Docket C15-0013-SC-05-C (5G Renewal) is withdrawn. Before this action, an approved 34-acre TCO and the 27-acre RBG were in effect in the H-Area final pit area.

3. **April 28, 2016** - Luminant submitted Revision No. 29 that requested additional time to complete rough backfilling and grading operations on 61 acres in the H-Area until December 31, 2016.
4. **June 13, 2016** - SMRD approved Revision No. 29 pending submittal of a reclamation plan.
5. **July 22, 2016** - Luminant meeting with SMRD Director and initial discussion of collaborative H-Area plan concepts being explored with the City and need to prepare a brief for SMRD Staff.
6. **August 1, 2016** - Luminant letter requesting an extension of Revision No. 29 for H-Area until February 28, 2017.
7. **August 3, 2016** - SMRD letter approving extension of Revision No. 29 until the sooner of February 28, 2017, or final Commission action on the H-Area reclamation plan.
8. **October 10, 2016** - Status update meeting with SMRD Staff where Luminant discussed the reclamation concept proposed for the Thermo Mine, including the potential goals being planned jointly with the City, and the subject of potential postmine land use change. Staff advised Luminant that maintaining current approved postmine land use at the final pit area would minimize risk of processing the application as significant.
9. **February 27, 2017** - Luminant letter requesting approval for additional time under Revision No. 29 until September 15, 2017, based upon a projected submittal of a revision to the approved reclamation plan for the H-Area.
10. **March 29, 2017** - Luminant and the City sign a Letter of Intent ("LOI"); SMRD is copied April 3, 2017.
11. **April 19, 2017** - SMRD approved additional time under Rev. 29 until September 15, 2017.
12. **May 16, 2017** - Joint SMRD/City/Luminant meeting in Austin with Commission leadership, SMRD, Luminant, Russell & Sons, and City Manager and Councilmen to discuss more advanced reclamation plan concept, LOI, and City interest in advancing the plan.
13. **July 17, 2017** - SMRD Director approves Rev. 29 extension to August 1, 2017.
14. **July 31, 2017** - Luminant submitted Revision No. 34 that requests approval of the proposed H-Area Reclamation Plan, along with general design plans for the H-03 Permanent Impoundment. The plan follows the reclamation concepts previously discussed with SMRD Staff, including a larger relocated H-03 pond, adjoining hill, and proposes land use change only on loading station and entrance road area (to I/C).
15. **September 5, 2017** - Luminant receives draft Technical Comments from SMRD Staff for Revision No. 34. The draft provided 21 technical comments.
16. **November 30, 2017** - Luminant/SMRD Staff conference call to review Staff's draft Technical Comments. First indication from Staff that Rev. 34 may be viewed "significant." Staff suggests Luminant may wish to consider withdrawing and resubmitting the application.
17. **December 5, 2017** - SMRD letter informs Luminant that Revision Application No. 34 was determined to be a significant revision because "...the proposed changes constitute a significant departure from the approved reclamation operations in accordance with §12.226(a)(1)."
18. **December 13, 2017** - Luminant email to Travis Wootton (SMRD) indicating that Luminant wishes to proceed with processing of application for Revision No. 34.
19. **January 19, 2018** - SMRD determines application "incomplete" and "not accepted for filing."

As is noted in the chronology above, an integral part of Luminant's reclamation plan for the subject area is tied to the public interests described in the March 29, 2017 LOI with the City entitled "Letter of Intent for the Development and Conveyance of Approximately 4,900 acres, Formally the Thermo Mine, Located in or Near Sulphur Springs, Texas." In this agreement, the City, recognizing that the property is subject to the reclamation requirements of the Commission, expresses its desire to develop, use, and maintain the property as a multi-use site for its residents, and eventually own and develop the property toward recreational and commercial uses. The agreement contemplates a 475 acre-feet pond requiring a water rights permit within the H-Area, haul roads, rail lines, bridges, office and other facilities, and expresses the City's desire for transfer of the property to the City as expeditiously as possible.

Luminant, and the City to a lesser extent, have consulted with the Commission for over 12 months before submittal of Revision No. 34. Indeed, Luminant has applied the advice provided by SMRD in those pre-application consultations. Given the significant level of pre-application consultation regarding this matter, Luminant finds the Commission's subsequent determinations of "significant" and "incomplete, ... not accepted for filing," as inconsistent with regulatory guidance, SMRD feedback during pre-application meetings, initial processing, and past practice.

Determination of Revision No. 34 as a "Significant" Revision

As noted above, Luminant was notified on December 5, 2017 that Revision No. 34 was determined to be a "significant" revision because "...the proposed changes constitute a significant departure from the approved reclamation operations in accordance with §12.226(a)(1)". No additional information was provided to support this determination. Section 12.226(a)(1) states that a revision to a permit shall be obtained, among other reasons:

[F]or changes in the surface coal mining or reclamation operations described in the original application and approved under the original permit, when such changes constitute a significant departure from the method of conduct of mining or reclamation operations contemplated by the original permit. Significant departures would include any change in permit area, mining method or reclamation procedure, which would, in the opinion of the Commission, significantly change the effect the mining operation would have on either those persons impacted by the permitted operation or on the environment]. (Emphasis added)

Luminant's Revision No. 34 proposed no change in permit area, no change in mining method, and no significant change to the reclamation method or procedure from that previously approved in Permit No. 5G, that would impact any landowners (Luminant is the landowner), the public, or the environment.

- The proposed change to the final pit area proposes the same approved postmine land uses and only includes change in the location, scale, and shape of the approved pond (H-03) and to the adjoining postmine topography.
- The difference in pond location and scale is consistent with previously approved permanent impoundments at this and other Luminant mines and provides added water resource land-use value to Luminant and the prospective landowner (the City).
- The postmine contours for the proposed hill adjoining the H-03 pond do not exceed maximum premine slopes for the area. These are strongly sloping to moderately steep (7:1 - 5:1) and stable grades, favorable for agricultural use, and are proposed in support of the long-term developmental goals of the City. While the top-of-slope elevation is unique to the immediate surrounding land, it is a crucial aspect of City's developmental plans, and overall slope, not elevation, is the determining factor in achievement of "approximate original contour". Further, the adjoining hill does not constitute excess spoil, since proposed postmine grades will be achieved to meet reclamation goals.
- Further, proposed Industrial/Commercial land use for the Thermo Mine loading station/shop/office area and adjoining road surfaces, is also in keeping with the City's expressed desire to retain these facilities and is consistent with Industrial/Commercial postmine land use designation on similar facilities at Luminant mines. No changes proposed within Revision No. 34 contemplate any changes in operation that would negatively impact the environment. In fact, the proposed changes will have no detrimental effect on off-site water quality or postmine soil quality, and postmine areas will be required to meet water quality and reclamation success performance standards.

A determination of non-significant "administrative" revision is warranted for Revision No. 34, especially given the prior SMRD consultation and guidance. Also, a determination of a "significant" revision would represent an unnecessary break from SMRD's past practice. Indeed, Commission Directive Notice ID No. RP-AP-226 Rev.1, notes that:

Non-significant permit revisions are changes requested by permittees to the permit that do not constitute a significant change to the effect the mining operation would have on either those persons impacted by the permitted operation or on the environment. (Emphasis added).

Significant changes to the effect of mining is neither planned or anticipated.

- AFM/TFM will be covered with a minimum of four feet of approved suitable material, approved revegetation practices will be employed, and water quality will be maintained.
- Proposed changes to the vegetation or land uses do not exceed the normal variations in the reclamation planning process historically, and no aspect of the proposed plan is anticipated to impact postmine water or soil quality or productivity.
- Postmine land uses are consistent with approved premine uses and only includes change in the location, scale and shape of the approved pond (H-03) and the facility area. Postmining land use changes for the A-Area access road and loading station area to Industrial/Commercial is consistent with the current use and the desired use by the City.
- Luminant and SMRD Staff openly discussed, during pre-application meetings, keeping the current approved land uses in order to minimize risk of a "significant" determination. All land use changes serve a purpose for the anticipated end user.

Determination of Revision No. 34 as Incomplete... and Not Accepted for Filing

As discussed above, Luminant was notified by letter dated January 19, 2018, that Revision No. 34 was determined to be "...incomplete and is not accepted for filing..." This determination appears to be predicated on the application being processed as a significant permit action under Directive Notice PR-AP-RE. As noted in the "Prologue" attached to SMRD's January 19th letter:

Rule §12.107(a) as supported by §12.226 indicates that a revision application deemed to constitute a significant change to the approved plan shall be complete and include, at a minimum, all the applicable information required under §§12.116-12.123, §§12.124-138, and §§12.139-12.154.

Notwithstanding Luminant's view that Revision No. 34 should be processed administratively, it is our concern that the full spirit of Directive Notice PR-AP-RE to "ensure that good communication is established... thereby expediting the mine permitting process..." has not been applied in the decision process in that a "significant" determination would have been made much earlier, *i.e.*, before the June 31, 2017 submittal, in keeping with Part III of the Directive sub-titled "Pre-Application Consultation and Coordination." If that had occurred, the subsequent "incomplete" determination may have been avoided.

Luminant submitted Revision No. 34 on July 31, 2017, after considerable pre-application consultation with the Commission, and with the understanding that the application would be processed administratively as had been discussed. It is Luminant's belief that the seven-day timeframe for determination of administrative completeness, reasonably expired in August 2017. In fact, Luminant received SMRD Staff's draft Technical Comments on September 5, 2017, which draft indicated that "Initial (review) of Revision No. 34 submitted by letter dated July 31, 2017, is complete." Luminant then set about evaluating the comments and scheduled and held a conference call with Staff for review purposes. A determination, five months after application submittal, that the application was incomplete

Mr. J. Denny Kingsley, P.E., Director

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February 15, 2018

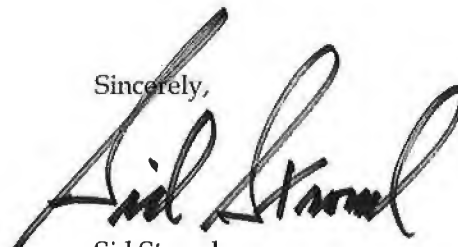
is inappropriate given the chronology of good-faith consultation and work between Luminant and SMRD in advance of filing the application.

Request for Reconsideration

Based on the foregoing and to expedite reclamation efforts and the goals of Luminant, the Commission, and the City, we respectfully request that you reconsider both SMRD's December 5, 2017 determination of significance and its January 19, 2018 determination of incompleteness, and find that Revision No. 34 may be deemed complete and processed administratively. Luminant stands ready to meet with the Commission at a convenient time regarding this matter.

Please let me know if you have any questions.

Sincerely,



Sid Stroud

SS/SS/tg

CC: David Cooney, Office of General Counsel
Matthew C. Henry, Vinson & Elkins LLP
Tab R. Urbantke, Vinson & Elkins LLP



RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

January 19, 2018

Sent by Email

Mr. Sid Stroud
Manager, Mine Compliance
Luminant
Environmental Services
6555 Sierra Drive
Irving, TX 75039

RE: Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan

Dear Mr. Stroud:

Initial review of Revision No. 34 submitted by letter dated July 31, 2017, is complete. Luminant submitted additional information by letter dated January 11, 2018, in response to SMRD letter dated December 5, 2017, in which I notified you that I had determined that the application was a significant revision to the approved permit. In Revision No. 34, Luminant requests approval of a proposed H-Area Reclamation Plan, which includes general design plans for H-03 Permanent Impoundment and a Form SMRD-1C updating the mailing addresses and listing of individuals who are authorized to act on behalf of Luminant. The revised application includes information for sections .123, .139 and .147. Luminant provided a \$500 revision-application filing fee with the application.

SMRD Directive Notice PR-AD-RE requires that Staff determine within seven days of receipt of a significant application (Form SMRD-1C and draft public notice received on January 11, 2018) whether an application is administratively complete. The application is incomplete and is not accepted for filing at this time. I am suspending processing of the application pending: (1) Luminant's assessment of the information described in the attached lists; (2) a subsequent meeting to arrive at a path forward in processing this application; and (3) the submittal of a supplement to address those concerns deemed necessary to obtain a complete application. Please note that two lists are attached. The first list (List A) contains concerns that appear to render the application incomplete. The second list contains concerns that appear to render the application deficient, and is intended to assist Luminant in its preparation of a supplemental document. Please contact me or Mr. Martin Alvarez, Staff's coordinator for review of this application, by January 25, 2018, to set up a meeting to discuss this application and attached concerns.

Sincerely,

A handwritten signature in blue ink, reading "Travis L. Wootton".

Travis L. Wootton, Assistant Director
Surface Mining and Reclamation Division

TLW/MA/rv
Enclosure
File Reference No. 1721314

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application Incomplete or Deficient
January 19, 2018

Page 1

Prologue

Rule §12.107(a) as supported by §12.226 indicates that a revision application deemed to constitute a significant change to the approved plan shall be complete and include, at a minimum, all the applicable information required under §§12.116-12.123, §§12.124-12.138, and §§12.139-12.154. The proposed application contains information from only three sections: .123, .139, and .147.

There are two lists provided below. Staff notes that the information in the lists does not necessarily constitute an all-inclusive list of information that appears to be missing from or deficient in this application, because the lists stem from a preliminary, rather than an exhaustive, review. In the first list, List A, Staff describes excluded items that appear to render the application incomplete. In the second list, List B, Staff describes concerns suggesting that the application is deficient, to assist Luminant in its preparation of a supplement.

Staff values Luminant's input to authenticate these lists and therefore requests that Luminant set up a meeting to address and verify which items are necessary for completeness.

List A. Excluded or Obsolete Items that Appear to Render the Application Incomplete

- A-1. Luminant did not revise several tables in the approved permit to account for the activities/changes described in this revision application (e.g., Table 119-1, *Mined and Affected Areas for the Life of Mine*, Table 125(a)-1, *Mine Block Acreage for the Life of Mine*, Table 139(a)-2, *Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone Variances, etc.*).
- A-2. Luminant did not revise several plates/maps in the approved permit to account for the activities/changes described in this revision application.
- A-3. The proposed postmine land use (PMLU) does not include information required at §12.399 (a)(1) and (a)(2).
- A-4. Luminant did not provide a plan and schedule for revegetation as required at §§12.390 through 12.393, and §12.395.
- A-5. Luminant did not revise several permit components considering the activities/changes described in this revision application (e.g., fish and wildlife protection plan (section .144), surface-water control plan (section .148), stream-channel diversion descriptions (section .150), transportation-plan information (section .154), etc. Luminant proposes only changes to information in three application sections: .123, .139, and .147.

List B. Concerns that Appear to Render the Application Deficient

- B-1. Luminant does not indicate why it proposes to leave an approximately 120-ft high temporary unsuitable-material stockpile (northwest of proposed H-03 Permanent Impoundment) as a permanent structure in Zone 1.

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application Incomplete or Deficient
January 19, 2018

Page 2

- B-2. Revised operation plan sheets (Plates with a "139-1-" prefix) are required to reflect changes to the operation plan in the H Area resulting from this proposed H-Area reclamation plan.
- B-3. The proposed reclamation plan does not meet/include information required as per §12.384(b)(1), §12.384(b)(2), §12.145(b)(3), §12.363, etc.
- B-4. Mining has ceased; therefore, the statement in the last paragraph of page 139-E-2 under the *H-03 Pond* description should be corrected.
- B-5. The last paragraph of page 139-E-2 under the description of the *Zone 3 Suitable Material Leveling* should refer to Zone 3 instead of Zone 2. Additionally, please note that there are significant changes to Table 139(b)-1 (*Slope Comparison Table*) compared to the approved table.
- B-6. §12.139 Luminant provides general design information for the proposed H-03 Permanent Impoundment in Table 139(b)-3, *Permanent Impoundment Schedule*. Additionally, in the legend on Plate 147-1, *Postmine Land Use Map*, Luminant identifies the H-01 Treatment Pond and H-01 Sedimentation Pond as proposed developed water resource structures. In the SMRD's records, these two structures (H-01 Treatment Pond and H-01 Sedimentation Pond) are approved temporary structures. Please explain and/or provide detailed design plans/calculations as necessary.
- B-7. §12.139 According to revised Table 139(b)-3, detailed design plans for H-01 Treatment Pond and H-01 Permanent Impoundment will be submitted in 2020, and detailed design plans for H-03 Permanent Impoundment will be submitted in 2019. Luminant indicates that activities associated with the H-Area reclamation plan will be complete by March 1, 2019. No information is provided in the revised portions of section .139 to describe the impacts of the proposed reclamation strategy on timing of submittal of detailed design plans for H-01 Permanent Impoundment H-01 Treatment Pond. As part of the proposed H-Area reclamation plan, the date of submittal of design plans has not been provided. Staff needs this information to determine how this plan elements coincides with the rest of the reclamation schedule.
- B-8. §12.139 Revised Table 139(a)-2 (*Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone*), Table 139(a)-3 (*Progressive Characteristics for Backfilling and Grading (B&G) Time Frame and Distance Variances*) that includes a reference to Appendix 139-E for the proposed H-Area Reclamation Plan, and Table 139(b)-1 (*Primary Sedimentation Control Structures and Impoundment Schedule*) that includes revised pond information, are required.
- B-9. §12.139 Luminant indicates on Table 139 E-2 that there are 379,300 yd³ of "Recoverable Suitable Material" in suitable material H-Area Stockpile No. 1. In the text on page 139-E-1, Luminant indicates that this same stockpile has a maximum storage capacity of 318,000 yd³. Additionally, on page 139(b)-4 of the approved permit (Supplemental Document No. 4), Luminant indicates that "...[i]t is estimated that approximately 318,000 loose cubic

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application Incomplete or Deficient
January 19, 2018

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yards of suitable material will be placed in the suitable material stockpile.” An explanation is needed for the origin of the additional 61,300 yd³ of suitable material and why this material was placed in a stockpile not designed nor bonded for this material quantity.

- B-10. §12.139 Luminant indicates in *Table 139 E-2* that there are 178,204 yd³ of “*Recoverable Suitable Material*” in suitable-material H-Area Stockpile No. 2; however, text on page 139-E-1 indicates that suitable-material H-Area Stockpile No. 2 has a maximum storage capacity of 430,000 yd³. An explanation is needed describing where the suitable material expected to be stored in this stockpile was placed.
- B-11. §12.139 Review of Tables 139 E-1 and 139 E-2 indicates that, for Zone 2 and for Zone 3, adding the “*Required Suitable Material*” (Table 139 E-2) to the suitable material to be moved (Table 139 E-1) equals the “*Recoverable Suitable Material*” in Table 139 E-2. Staff believes this should also be the case for Stockpile Nos. 1 and 2. In addition, Staff notes that the total cubic yards listed in Table 139 E-2 Appear to be incorrect.
- B-12. §12.139 Luminant classifies the material that will remain in Zone 2 and in Zone 3 as “Suitable Material” in an affected area that was not mined during progression of the active pit. Luminant provided no details regarding the potential ripping and diking of Zone 2 and Zone 3 following suitable material removal, nor what it plans to do with the excess stockpile material. Staff considers that Luminant’s proposed ripping and diking plan must be no less intensive than that approved for the Oak Hill Mine, Permit No. 46C, Revision No. 40.
- B-13. §12.139 Information needs to be provided to clarify how Luminant determined the amount of recoverable suitable material in each zone and in each stockpile as listed in Table 139 E-2, including the depth of removal.
- B-14. §12.139 Luminant indicates in Appendix E that mobile equipment will move approximately 750,000 cubic yards of subgrade material from Zone 1; however, it is not clear where the material will be placed. Additionally, an explanation has not been provided to justify the proposed start date of the activities proposed in the reclamation plan.
- B-15. §12.139 Luminant did not provide physicochemical data for all materials considered for placement in the postmine top four feet. Additionally, no geologic cross sections were provided for Zones 2 and 3. Staff considers that a cross section extending through all locations, to include the stockpiles, are appropriate.
- B-16. §12.139 Luminant is apparently proposing to cover the approximately 120-foot high temporary stockpile, which contains acid/toxic-forming materials from which acidic drainage is flowing to the nearby pit, with approximately four (4) feet of suitable material. Staff considers that this proposal is counter to requirements at §12.386(4) that acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
Proposed H-Area Reclamation Plan
Concerns Rendering the Application Incomplete or Deficient
January 19, 2018

Page 4

- B-17. §12.139 Review of available aerial photographs indicates the presence of rills and gullies on the approximately 120-foot high stockpile. On Plates 139-2-1, 139-3-1, and 147-1, Luminant depicts the existing stockpiles but does not provide a clear depiction of the proposed postmine contours. Luminant has not demonstrated that rills and gullies will not disrupt the postmine land use or the reestablishment of the vegetative cover or cause or contribute to a violation of water-quality standards for receiving streams as required at §12.389(b).
- B-18. §12.145 It is unclear whether a revised reclamation cost estimate is required considering the activities/changes described in this revision application.
- B-19. §12.150 Luminant does not appear to have provided information concerning the final disposition of three diversions constructed in the area. One diversion (H-01 Diversion) routes water around the northeastern edge of H-Area into H-01 Permanent Impoundment. The other two diversions (H-02 Diversion and H-03 Diversion) route water around the southwestern edge of H Area into H-01 Permanent Impoundment.



Sid Stroud
Manager, Mine Compliance
Environmental Services
sid.stroud@luminant.com

Luminant
6555 Sierra Drive
Irving, Texas 75039

T 214.875.9129
C 214.729.2171
F 214.875.8699

Railroad Commission
of Texas
RECEIVED

JAN 12 2018

January 11, 2018

Mr. J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711-2967

Surface Mining Division

RE: Luminant Mining Company LLC ("Luminant")
Monticello-Thermo Mine, Permit No. 5G
Revision Application No. 34
H-Area Reclamation Plan

Dear Mr. Kingsley:

Enclosed are five (5) additional copies of Revision Application No. 34 at the Monticello-Thermo Mine, Permit No. 5G being provided in accordance with your December 5, 2017 letter. The additional copies contain a draft public notice and the same Form SMRD-1C that was included with the original application filing dated August 1, 2017. I am also providing three (3) additional copies of the draft public notice, along with appropriate Section §12.123 tabs for insertion into the original copies filed on August 1, 2017.

Please contact Scott Mills at (214) 875-9090 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Sid Stroud", is written over the word "Sincerely,".

Sid Stroud

SS/SM/tg
Enclosure

PUBLIC NOTICE
NOTICE OF APPLICATION FOR
REVISION OF SURFACE MINING PERMIT NO. 5G
Monticello-Thermo Mine
Luminant Mining Company LLC
Docket No. _____

Luminant Mining Company LLC ("Luminant"), 6555 Sierra Drive, Irving, Texas 75039 has submitted an application titled Monticello-Thermo Mine, Permit No. 5G, Revision No. 34 ("Application"), to the Railroad Commission of Texas Surface Mining and Reclamation Division ("Commission") seeking approval to revise Permit No. 5G with a revised reclamation plan for the H-Area Mine.

Permit 5G consists of approximately 4,506-acres in Hopkins County and is located approximately three miles southeast of the town of Sulphur Springs, Texas and is contained within the "Sulphur Springs S.E." U.S. Geological Survey 7.5 minute, quadrangle map for Texas.

The permit boundary follows State Highway 11 from the intersection of FM 1870 westward to the intersection of Hopkins County Road No. 2309 where it meanders westward along property tract boundaries to a point near the intersection of State Highway 11 and County Road No. 2307. The boundary then generally follows County Road No. 2307 northward for approximately 0.7 mile where it turns and runs southwestward until it intersects State Highway 11. The boundary then generally follows State Highway 11 northwestward approximately 0.7 mile where it turns north and then eastward before dropping southward to intersect CR 2307. The boundary then moves northeastward to again intersect CR 2309. It then follows CR 2309 northward to intersect the Louisiana-Arkansas Railroad where it follows the railroad's southern right-of-way eastward to a point approximately one mile past the intersection of FM 1870. The boundary then drops southward for approximately 0.7 miles and then moves westward to again intersect FM 1870 where it follows FM 1870 southward to State Highway 11.

The Application is made pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. Chapter 134 (Vernon Supp. 2017) and the Coal Mining Regulations, Texas Railroad Commission, TEX. ADMIN. CODE, Title 16, Part 1, Chapter 12 (Thomson Reuters 2017). Notice will be published once a week for four (4) consecutive weeks. Requests for public hearing must be submitted within 45 days of the last date of publication of this notice. Interested persons are invited to submit written comments on the Application. All written comments, objections or requests for public hearing or informal conference on the Application should be directed to:

_____, Administrative Law Judge
Hearings Division
C/o Docket Services, Docket No. _____
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711-2967

The application proposes to update the slope comparison table and the permanent impoundment schedule. Updates to the post-mine contours, post-mine slopes and post-mine land use information are also proposed for consideration with Revision Application No. 34.

A copy of the application dated August 1, 2017, consisting of one (1) volume, may be inspected in the main office of the Railroad Commission of Texas at 1701 North Congress, William B. Travis Building, Austin, Texas, or at the office of the Hopkins County Clerk's office, 128 Jefferson Street, Sulphur Springs, Texas 75482.

This permit application may be supplemented from time to time, with supplemental or revised information (including revised maps, drawings and plates) placed in separate volumes and filed for public inspection. Interested persons should contact the Administrative Law Judge or continue to check the public copies of the application to determine the current status.



RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

December 5, 2017

Sent by Email

Mr. Sid Stroud
Manager, Mine Compliance
Luminant
Environmental Services
6555 Sierra Drive
Irving, TX 75039

RE: Luminant Mining Company LLC (Luminant)
Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan

Dear Mr. Stroud:

Revision No. 34 submitted by letter dated July 31, 2017, includes a request for approval of a proposed H-Area Reclamation Plan, which includes general design plans for H-03 Permanent Impoundment and revised Form SMRD-1C, updating Luminant's mailing address and its listing of those individuals authorized to act on behalf of Luminant. Luminant provided a \$500 revision-application filing fee with the application.

The application has been determined to be a significant revision because the proposed changes constitute a significant departure from the approved reclamation operations in accordance with §12.226 (a)(1). Luminant should submit five additional copies of the application, an original Form SMRD-1C, and a draft public notice. Upon receipt of this updated application, it will be transferred to the Commission's Office of General Counsel-Hearings Section for docketing in accordance with 16 TEXAS ADMIN. CODE §§1.24 and 1.41 (*General Rules of Practice and Procedure*) and §12.226 (*Texas Coal Mining Regulations*).

Should you have any questions, please feel free to contact me or Martin Alvarez, technical coordinator for review of this application.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' and 'K' followed by a horizontal line.

J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division

JDK/MA/rv
File Reference No. 1721314

Martin Alvarez

MTSG - REV. No. 34 - 1721314

From: Penson, Demetrie
Sent: Monday, October 02, 2017 4:20 PM
To: Tim Walter
Cc: Martin Alvarez; Travis Wootton; Adam Krabbenhoft
Subject: RE: 5G Rev 34: Draft Comment Responses, File Reference No. 201721314

Thanks for the email Tim. I forwarded the information in the previous email for Martin's initial review since we were unsuccessful in finding an opportunity to discuss the details of our evaluation of the comments (I believe Martin was away at training for a few days last week). We did take advantage of an opportunity to discuss the contents of the revision with Martin, prior to the 9/5/17 email, but wanted to follow up for additional discussion as stated in my email. Per your suggestion, we can likely set up a conference call to discuss the details of how we resolve the outstanding comments.

Thanks,

Demetrie Penson P.E.
Permit Coordinator
Environmental Services

Luminant

From: Tim Walter [mailto:Tim.Walter@rrc.texas.gov]
Sent: Friday, September 29, 2017 3:42 PM
To: Penson, Demetrie
Cc: Martin Alvarez <Martin.Alvarez@rrc.texas.gov>; Travis Wootton <Travis.Wootton@rrc.texas.gov>; Adam Krabbenhoft <Adam.Krabbenhoft@rrc.texas.gov>
Subject: RE: 5G Rev 34: Draft Comment Responses, File Reference No. 201721314

EXTERNAL EMAIL

Hi Demetrie,

Thank you for your draft errata. I am responding for Martin, as I want to be sure you are aware of the status of this application. For this revision, we were unable to obtain an expedient response to our draft comments sent by email on September 5, 2017; therefore, because this revision has some complex issues that merit detailed investigation and discussion, I have logged our September 5th draft comments as a response request from Staff and placed it in your court as of that date.

As a note, we had expected to meet or hold a phone conference to discuss the noted issues rather than be waiting for a written response. To that end, I request that you contact us to schedule a meeting to discuss your potential responses to be provided in a supplement. I will advise you that our initial review of the errata would indicate that it does not appear to address all of the issues that were noted and that many concerns remain that need further discussion.

Please feel free to contact me if you have questions or would like to set up a meeting or telephone call.

Regards, Tim

Timothy G. Walter, P.G.
Advising Hydrogeologist
Manager, Applications and Permits
Surface Mining and Reclamation Division
Railroad Commission of Texas
P.O. Box 12967
Austin, TX 78711-2967
(512) 305-8808



From: Penson, Demetrie
Sent: Friday, September 29, 2017 12:23 PM
To: Martin Alvarez <Martin.Alvarez@rrc.texas.gov>
Cc: Mills, Scott >; Fernandez, Celi >; Adam Krabbenhoft <Adam.Krabbenhoft@rrc.texas.gov>
Subject: 5G Rev 34: Draft Comment Responses

Martin,

I have attached our responses to the 5G Rev 34 draft comments to this email. If possible, we'd like to further discuss comments 11 and 12 to make sure we clearly understand what may be required to address the concern. Please let us know if you have any other questions.

Thanks,

Demetrie Penson P.E.
Permit Coordinator
Environmental Services

Luminant

Confidentiality Notice: This email message, including any attachments, contains or may contain confidential information intended only for the addressee. If you are not an intended recipient of this message, be advised that any reading, dissemination, forwarding, printing, copying or other use of this message or its attachments is strictly prohibited. If you have received this message in error, please notify the sender immediately by reply message and delete this email message and any attachments from your system.

Monticello-Thermo Mine, Permit No. 5G
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H-Area Reclamation Plan
Staff Technical Comments
September 5, 2017

1. Luminant indicates in Appendix E that mobile equipment will move approximately 750,000 cubic yards of subgrade material from Zone 1; however, it is not clear where the material will be placed.

Luminant Response:

Luminant indicates on page 139-E-1 and Table 139 E-1 that the 750,000 cubic yards of subgrade material will remain in Zone 1.

2. Additionally, explanation is needed to clarify why the activities associated with the proposed H-Area Reclamation Plan are to begin on June 1, 2018, almost a year from now.

Luminant Response:

The proposed start date for the pending reclamation plan has been selected in consideration of the time required to complete SMRD review/approval of this application as well as further follow-up with the City of Sulphur Springs regarding the approved plan, the execution of the project bidding process and the mobilization of the contractor to execute the reclamation schedule. Activities will begin earlier if possible under these circumstances.

3. Luminant indicates on Table 139 E-2 that there are 379,300 yd³ of "Recoverable Suitable Material" on suitable material H-Area Stockpile No. 1, and text on Page 139-E-1 indicates that suitable material H-Area Stockpile No. 1 has a maximum storage capacity of 318,000 yd³. Additionally, Page 139(b)-4 of the approved permit indicates "...it is estimated that approximately 318,000 loose cubic yards of suitable material will be placed in the suitable material stockpile." Please explain.

Luminant Response:

The intent of Table 139 E-2 is to demonstrate adequate suitable material is in place to support the reclamation of the area in question. The noted recoverable suitable material for Stockpile No. 1 represents the contents of the stockpile (316,200 cy) as well as the existing 4.3 feet of suitable material below the stockpile (66,031 cy).

4. Luminant indicates on Table 139 E-2 that there are 178,204 yd³ of "Recoverable Suitable Material" on suitable material H-Area Stockpile No. 2; however, text on Page 139-E-1 indicates that suitable material H-Area Stockpile No. 2 has a maximum storage capacity of 430,000 yd³. Please explain.

Luminant Response:

The intent of Table 139 E-2 is to demonstrate adequate suitable material is in place to support the reclamation of the area in question. The noted recoverable suitable material for Stockpile No. 2 represents the contents of the stockpile (79,000 cy) as well as the existing 4.3 feet of suitable material below the stockpile (99,204 cy). The maximum capacity of the stockpile has not been achieved.

5. Please provide information to clarify how Luminant calculated the amount of recoverable suitable material on each zone and stockpile as stated on Table 139 E-2, to include depth of removal.

Luminant Response:

The amount of recoverable suitable material is based on a material balance plan conducted by our Thermo Mine Engineering personnel. The plan is based on removing an adequate volume of material to support reclamation of the final pit while leaving the required depth of suitable material in place at

Monticello-Thermo Mine, Permit No. 5G

Revision No. 34

H-Area Reclamation Plan

Staff Technical Comments

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the source locations. Depth is a variable component of this plan as it will increase or decrease as Luminant reclaims according to the pending postmine contours. The volume of material in Stockpile Nos. 1 and 2 was calculated with a volumetric assessment of survey data.

6. Review of *Table 139 E-2* indicates that adding the “*Required Suitable Material*” to the suitable material to be moved (Zone 2 and Zone 3) equals the “*Recoverable Suitable Material*.” Staff believes this should be the case for Stockpile 1 and Stockpile 2. Additionally, please check the totals cell on *Table 139 E-2*.

Luminant Response:

Luminant has revised *Table 139 E-2* to reflect the correct total for “*Required Suitable Material*”. A copy of the revised table has been included in this supplemental document.

7. Luminant does not indicate why it proposes to leave an approximately 100-foot high temporary unsuitable stockpile (northwest of proposed H-03 Permanent Impoundment) as a permanent structure on Zone 1.

Luminant Response:

The proposed postmine contours are based on the reclamation strategy requested by the end user of the property (City of Sulphur Springs). This information was presented in a meeting between Luminant, members of the SMRD Director, Assistant Director, Technical Staff, and leadership from the City of Sulfur Springs on May 16, 2017. Revision Application No. 34 is consistent with the information presented during that meeting.

8. Luminant indicates that 750,000 yd³ of unsuitable material in Unsuitable Material Stockpile No. 1 will be used in reclamation of the H-Area, but does not characterize the material underlying this stockpile or describe its plan to avoid over excavation of the stockpile area since it is located on land that was not otherwise disturbed by mining activities.

Luminant Response:

Luminant indicates on page 139-E-1 that Stockpile No. 1 contains suitable material.

Plan to avoid over excavation? Removal of stockpile material will be closely monitored by Luminant personnel to ensure that native premine soils are not negatively impacted to create an unsuitable postmine soil. Premine topographical data will aid in this effort. Execution of the approved postmine soil monitoring plan will demonstrate soil suitability.

9. Luminant classifies the material that will remain in Zone 2 and Zone 3 as “*Suitable Material*” in an affected area that was not mined during progression of the active pit. Luminant provided no details regarding the potential ripping and disking of Zone 2 and Zone 3 following suitable material removal. Staff needs further details regarding the proposed ripping and disking of Zones 2 and 3 following suitable material removal and information concerning whether and to what extent soil amendments will be incorporated.

Luminant Response:

Luminant has revised page 139-E-2 to include information regarding ripping and disking. A copy of this information is included in this supplemental document.

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10. Luminant did not provide physicochemical data for materials considered for placement in the postmine top four feet. Additionally, no geologic cross sections were provided for Zones 2 and 3. Staff considers that a cross section extending through all locations, to include the stockpiles, are appropriate.

Luminant Response:

The physicochemical data for the materials proposed in the application for placement in the postmine top four feet is in the currently approved 5G Permit. The existing Stockpile No. 1 is an approved suitable material storage area and its contents, as well as the material proposed for recovery from Zones 2 and 3, are comprised of material from the approved suitable layers in the H-Area.

11. The proposed H-Area Reclamation Plan does not meet Section §12.384(b):

- Section §12.384(b)(1) ...disturbed areas shall be returned to AOC, ... graded to eliminate ...spoil piles, ...
- Section §12.384(b)(2) ... to support approved postmining land use.
- Additionally, Section §12.145(b)(3) ... with contour maps or cross sections that show the anticipated final surface configuration... in accordance with §§12.384-12.389...
- Significant changes to Table 139(b)-1 (*Slope Comparison Table*) compared to approved table.

Luminant Response:

Please clarify if this is a statement or a question.

12. Luminant is proposing to cover the approximately 100-foot high temporary stockpile, which contains acid/toxic forming materials, with four (4) feet of suitable material. Staff considers:

- Section §12.386(2) ... these materials shall be treated to neutralize toxicity, in order to prevent water pollution and sustained combustion and minimize adverse effects on plant growth and land uses.
- Section §12.386(3) ... a thicker amount of cover using nontoxic material or special compaction and isolation from ground-water contact may be necessary to protect against upward migration of salts, exposure by erosion, formation of acid or toxic seep.
- Section §12.386(4) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.

Luminant Response:

Please clarify if this is a statement or a question.

13. Review of available aerial photographs, indicates the presence of rills and gullies on the approximately 100-foot high stockpile. Plates 139-2-1, 139-3-1, and 147-1 depict the existing stockpiles and do not provide a clear depiction of the proposed postmine contours. Staff is concern about rills and gullies

Monticello-Thermo Mine, Permit No. 5G
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which either disrupt the postmine land use or the reestablishment of the vegetative cover or cause or contribute to a violation of water-quality standards for receiving streams (expose soil layers could cause acid seepage). Consider the requirements of Section §12.389 in this proposed reclamation plan. "... contour maps or cross sections that show the anticipated final surface configuration... in accordance with §§12.384-12.389..." are necessary.

Luminant Response:

Execution of the reclamation plan will involve backfill and grading as well as placement of four feet of suitable material on the area of concern. Current rills and gullies associated with the stockpile will be eliminated in the regrading process, as has been discussed with Staff in previous meetings. Postmine revegetation and land management practices will serve to minimize erosion after final topography is achieved.

14. The proposed postmine landuse (PMLU) does not meet Section §12.399:

- Section §12.399 (a)(1) ... capable of supporting the uses which they were capable of supporting before any mining, or
- Section §12.399 (a)(2) ... higher or better uses achievable under criteria...

Luminant Response:

The land use changes proposed in this application are consistent with the land uses shown in the approved permit with the exception of a location change of the final pit pond, additional developed water resources in the northern H-Area and the conversion to Industrial/Commercial land use for the Office Shop area.

15. Revised operation plan sheets (Plates with a "139-1-" prefix) are required to reflect changes to the operations plan in the H-Area resulting from the proposed H-Area Reclamation Plan.

Luminant Response:

The proposed reclamation plan does not impact to the operation plan maps (plates with a "139-1-" Prefix). Any plates that were affected by this reclamation plan were provided with the reclamation plan.

16. Revised Table 139(a)-2 (*Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone*), Table 139(a)-3 (*Progressive Characteristics for Backfilling and Grading (B&G) Time Frame and Distance Variances*) that includes a reference to Appendix 139-E for the proposed H-Area Reclamation Plan, and Table 139(b)-1 (*Primary Sedimentation Control Structures and Impoundment Schedule*) that includes revised pond information, are required.

Luminant Response:

Table 139(a)-2 (*Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone*) and 139(a)-3 (*Progressive Characteristics for Backfilling and Grading (B&G) Time Frame*

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
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and Distance Variances) were not included as the H-Area Reclamation Plan does not impact the information listed.

Luminant has updated Table 139(b)-1. A copy of the revised table is included in this supplemental document.

17. Luminant provides general design information for proposed H-03 Permanent Impoundment on Table 139(b)-3 (Permanent Impoundment Schedule). Additionally, the legend on Luminant's Postmine Land Use Map (Plate 147-1) calls out the H-01 Treatment Pond and H-01 Sedimentation Pond as proposed developed water resource structures. SMRD records indicate these two structures (H-01 Treatment Pond and H-01 Sedimentation Pond) are approved temporary structures. Please explain and/or provide detailed design calculations as necessary.

Luminant Response:

Luminant included H-01 Pond and H-01 Treatment pond on plate 147-1 and Table 139(b)-3 as they are now proposed to be submitted as permanent in 2020.

18. According to revised Table 139(b)-3, detailed design plans for permanent impoundments H-01 Treatment Pond and H-01 Pond will be submitted in 2020, and detailed design plans for permanent impoundment H-03 will be submitted in 2019. Luminant indicates that activities associated with the H-Area Reclamation Plan will be complete by March 1, 2019. No information is provided in the revised portions of section .139 to describe the impacts of the proposed reclamation strategy on timing of submittal of detailed design plans for permanent impoundments H-01 Treatment Pond and H-01 Pond. As part of this proposed H-Area Reclamation Plan, the date of submittal of design plans should be provided so it can be determined how this coincides with the rest of the reclamation schedule.

Luminant Response:

The proposed H-Area Reclamation Plan addresses the reclamation of the H-Area Final Pit. This format is consistent with the standard format of Luminant reclamation plans. As noted in the comment above, the submittal of the schedule of the H-01 Pond is noted in Table 139(b)-3.

19. Luminant did not provide a plan and schedule for revegetation as required in §12.390 through §12.393, and §12.395.

Luminant Response:

The schedule for revegetation is listed in section .145 of the currently approved permit. Luminant will follow the revegetation schedule and plan according to the approved permit.

20. Given that mining has ceased, please correct the statement on the last paragraph of Page 139-E-2 under the *H-03 Pond* description.

Luminant Response:

Luminant has revised page 139-E-2. A copy of this information is included in this supplemental document.

Monticello-Thermo Mine, Permit No. 5G

Revision No. 34

H-Area Reclamation Plan

Staff Technical Comments

September 5, 2017

21. Please correct the last paragraph of Page 139-E-2 under the *Zone 3 Suitable Material Leveling* description to refer to Zone 3 instead of Zone 2.

Luminant Response:

Luminant has revised page 139-E-2. A copy of this information is included in this supplemental document.

DRAFT

Tim Walter

From: Martin Alvarez
Sent: Tuesday, September 05, 2017 3:12 PM
To: Penson, Demetrie
Cc: Tim Walter; Adam Krabbenhoft
Subject: MT5G - REV. No. 34 - H-AREA RECLAMATION PLAN - COMMENTS-1
Attachments: MT5G - REV. No. 34 - H-AREA RECLAMATION PLAN - DRAFT COMMENTS-1.docx

Demetrie,

Find attached, *initial "DRAFT" comments*, for the MT5G - REV. No. 34 - H-AREA RECLAMATION PLAN.

Please let me know when you will be available to discuss these comments.

Thanks

Martin Alvarez
Engineering Specialist
Surface Mining and Reclamation Division
Railroad Commission of Texas
(512) 463-2499



September 5, 2017

Sent by Email

Mr. Sid Stroud
Manager, Mine Compliance
Luminant
Environmental Services
6555 Sierra Drive
Irving, TX 75039

RE: Luminant Mining Company LLC (Luminant)
Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan

Dear Mr. Stroud:

Initial of Revision No. 34 submitted by letter dated July 31, 2017, is complete. Luminant requests approval of proposed H-Area Reclamation Plan, which includes general design plans for H-03 Permanent Impoundment and revised Form SMRD-1C updating mailing address and listing of individuals who are authorized to act on behalf of Luminant. This application includes information for sections .139 and .147. Luminant provided a \$500 revision-application filing fee with the application.

I have determined that the application is deficient, as described in the enclosed comments, and the 90-day administrative review period for this application is tolled to allow Luminant an opportunity to provide a response. After we receive your response, we will have 55 days to complete our review of this application.

Please provide your response to these comments within 30 days of receipt of this letter to facilitate completion of our review. Should you have any questions, please feel free to call me or xxxxxxxxx, technical coordinator for review of this application.

Sincerely,

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Surface Mining and Reclamation Division

xx/xx/
Enclosure
File Reference No. 1721314

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan
Staff Technical Comments
September 5, 2017

1. Luminant indicates in Appendix E that mobile equipment will move approximately 750,000 cubic yards of subgrade material from Zone 1; however, it is not clear where the material will be placed.
2. Additionally, explanation is needed to clarify why the activities associated with the proposed H-Area Reclamation Plan are to begin on June 1, 2018, almost a year from now.
3. Luminant indicates on *Table 139 E-2* that there are 379,300 yd³ of "*Recoverable Suitable Material*" on suitable material H-Area Stockpile No. 1, and text on Page 139-E-1 indicates that suitable material H-Area Stockpile No. 1 has a maximum storage capacity of 318,000 yd³. Additionally, Page 139(b)-4 of the approved permit indicates "...it is estimated that approximately 318,000 loose cubic yards of suitable material will be placed in the suitable material stockpile." Please explain.
4. Luminant indicates on *Table 139 E-2* that there are 178,204 yd³ of "*Recoverable Suitable Material*" on suitable material H-Area Stockpile No. 2; however, text on Page 139-E-1 indicates that suitable material H-Area Stockpile No. 2 has a maximum storage capacity of 430,000 yd³. Please explain.
5. Please provide information to clarify how Luminant calculated the amount of recoverable suitable material on each zone and stockpile as stated on *Table 139 E-2*, to include depth of removal.
6. Review of *Table 139 E-2* indicates that adding the "*Required Suitable Material*" to the suitable material to be moved (Zone 2 and Zone 3) equals the "*Recoverable Suitable Material*." Staff believes this should be the case for Stockpile 1 and Stockpile 2. Additionally, please check the totals cell on *Table 139 E-2*.
7. Luminant does not indicate why it proposes to leave an approximately 100-foot high temporary unsuitable stockpile (northwest of proposed H-03 Permanent Impoundment) as a permanent structure on Zone 1.
8. Luminant indicates that 750,000 yd³ of unsuitable material in Unsuitable Material Stockpile No. 1 will be used in reclamation of the H-Area, but does not characterize the material underlying this stockpile or describe its plan to avoid over excavation of the stockpile area since it is located on land that was not otherwise disturbed by mining activities.
9. Luminant classifies the material that will remain in Zone 2 and Zone 3 as "Suitable Material" in an affected area that was not mined during progression of the active pit. Luminant provided no details regarding the potential ripping and disking of Zone 2 and Zone 3 following suitable material removal. Staff needs further details regarding the proposed ripping and disking of Zones 2 and 3 following suitable material removal and information concerning whether and to what extent soil amendments will be incorporated.
10. Luminant did not provide physicochemical data for materials considered for placement in the postmine top four feet. Additionally, no geologic cross sections were provided for Zones 2 and 3. Staff considers that a cross section extending through all locations, to include the stockpiles, are appropriate.

Monticello-Thermo Mine, Permit No. 5G
Revision No. 34
H-Area Reclamation Plan
Staff Technical Comments
September 5, 2017

11. The proposed H-Area Reclamation Plan does not meet Section §12.384(b):

- Section §12.384(b)(1) ...disturbed areas shall be returned to AOC, ... graded to eliminate ...spoil piles, ...
- Section §12.384(b)(2) ... to support approved postmining land use.
- Additionally, Section §12.145(b)(3) ... with contour maps or cross sections that show the anticipated final surface configuration... in accordance with §§12.384-12.389...
- Significant changes to Table 139(b)-1 (*Slope Comparison Table*) compared to approved table.

12. Luminant is proposing to cover the approximately 100-foot high temporary stockpile, which contains acid/toxic forming materials, with four (4) feet of suitable material. Staff considers:

- Section §12.386(2) ... these materials shall be treated to neutralize toxicity, in order to prevent water pollution and sustained combustion and minimize adverse effects on plant growth and land uses.
- Section §12.386(3) ... a thicker amount of cover using nontoxic material or special compaction and isolation from ground-water contact may be necessary to protect against upward migration of salts, exposure by erosion, formation of acid or toxic seep.
- Section §12.386(4) Acid-forming or toxic-forming material shall not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution.

13. Review of available aerial photographs, indicates the presence of rills and gullies on the approximately 100-foot high stockpile. Plates 139-2-1, 139-3-1, and 147-1 depict the existing stockpiles and do not provide a clear depiction of the proposed postmine contours. Staff is concerned about rills and gullies which either disrupt the postmine land use or the reestablishment of the vegetative cover or cause or contribute to a violation of water-quality standards for receiving streams (expose soil layers could cause acid seepage). Consider the requirements of Section §12.389 in this proposed reclamation plan. "... contour maps or cross sections that show the anticipated final surface configuration... in accordance with §§12.384-12.389..." are necessary.

14. The proposed postmine landuse (PMLU) does not meet Section §12.399:

- Section §12.399 (a)(1) ... capable of supporting the uses which they were capable of supporting before any mining, or
- Section §12.399 (a)(2) ... higher or better uses achievable under criteria...

15. Revised operation plan sheets (Plates with a "139-1-" prefix) are required to reflect changes to the operations plan in the H-Area resulting from the proposed H-Area Reclamation Plan.

16. Revised Table 139(a)-2 (*Temporary Cessation of Operations, Backfilling and Grading Variances and Stream Buffer Zone*), Table 139(a)-3 (*Progressive Characteristics for Backfilling and Grading (B&G) Time Frame and Distance Variances*) that includes a reference to Appendix 139-E for the proposed H-

Monticello-Thermo Mine, Permit No. 5G
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H-Area Reclamation Plan
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September 5, 2017

Area Reclamation Plan, and Table 139(b)-1 (*Primary Sedimentation Control Structures and Impoundment Schedule*) that includes revised pond information, are required.

17. Luminant provides general design information for proposed H-03 Permanent Impoundment on Table 139(b)-3 (Permanent Impoundment Schedule). Additionally, the legend on Luminant's Postmine Land Use Map (Plate 147-1) calls out the H-01 Treatment Pond and H-01 Sedimentation Pond as proposed developed water resource structures. SMRD records indicate these two structures (H-01 Treatment Pond and H-01 Sedimentation Pond) are approved temporary structures. Please explain and/or provide detailed design calculations as necessary.
18. According to revised Table 139(b)-3, detailed design plans for permanent impoundments H-01 Treatment Pond and H-01 Pond will be submitted in 2020, and detailed design plans for permanent impoundment H-03 will be submitted in 2019. Luminant indicates that activities associated with the H-Area Reclamation Plan will be complete by March 1, 2019. No information is provided in the revised portions of section .139 to describe the impacts of the proposed reclamation strategy on timing of submittal of detailed design plans for permanent impoundments H-01 Treatment Pond and H-01 Pond. As part of this proposed H-Area Reclamation Plan, the date of submittal of design plans should be provided so it can be determined how this coincides with the rest of the reclamation schedule.
19. Luminant did not provide a plan and schedule for revegetation as required in §12.390 through §12.393, and §12.395.
20. Given that mining has ceased, please correct the statement on the last paragraph of Page 139-E-2 under the *H-03 Pond* description.
21. Please correct the last paragraph of Page 139-E-2 under the *Zone 3 Suitable Material Leveling* description to refer to Zone 3 instead of Zone 2.



Sid Stroud
Manager, Mine Compliance
Environmental Services
sid.stroud@luminant.com

Luminant
6555 Sierra Drive
Irving, Texas 75039

T 214.875.9129
C 214.729.2171
F 214.875.8699

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SKg

July 31, 2017

Mr. J. Denny Kingsley, P.E., Director
Surface Mining and Reclamation Division
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711-2967

**Railroad Commission
of Texas
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AUG 01 2017

Surface Mining Division

RE: Luminant Mining Company LLC ("Luminant")
Monticello-Thermo Mine, Permit No. 5G
Revision Application No. 34
H-Area Reclamation Plan

Dear Mr. Kingsley:

Enclosed are three (3) copies of Revision Application No. 34 at the Monticello-Thermo Mine, Permit No. 5G. Revision Application No. 34 is being submitted seeking Commission approval for the proposed H-Area comprehensive reclamation plan. Also, enclosed with this letter is an original Form SMRD-1C updating Luminant's mailing address and listing of individuals who are authorized to act on behalf of the applicant. A copy of the updated Form SMRD-1C is also included within Revision Application No. 34.

Also enclosed with this letter is the required permit application fee in accordance with Rule §12.108(a)(2) and a completed SMRD-2C Form. Approval of Revision Application No. 34 is being respectfully requested from the Commission.

Please contact Scott Mills at (214) 875-9090 if you have any questions.

Sincerely,

Sid Stroud

SS/SM/tg
Enclosure

File Ref. No. _____

Fee _____

(for official use only)

SMRD-2C

03/03/03

RAILROAD COMMISSION OF TEXAS

SURFACE MINING AND RECLAMATION DIVISION

3140749

Application for Nonsignificant Revision to Coal Mining Operations Permit

Complete all applicable portions. Please submit three (3) copies of your application on standard size paper (8 1/2" x 11", except for maps) to the Director of the Surface Mining and Reclamation Division. See *Texas Coal Mining Regulations* and the *Texas Surface Coal Mining and Reclamation Act* for information.

Name of Applicant: Luminant Mining Company LLC

Name of Mining Operation: Monticello-Thermo Mine Permit No. 5G

Permanent Mailing Address: 6555 Sierra Drive

Street or P O Box

Irving TX 75039

City State Zip Code

Contact Person Scott Mills Telephone: 214-875-9090

Revision Description Rev. 34 - H-Area Reclamation Plan and Updated Form SMRD-1C

Type of Revision [check appropriate box(s)]

Administrative ☒ Operation Plan ☒ Reclamation Plan ☒ Incidental Boundary Revision ☐

Section of Permit to be Revised [check appropriate box(s)]

Legal, Financial and Compliance-Related Info (Administrative Information):

Right of Entry/Property	§§12.116, 12.117	<input type="checkbox"/>	Other Permits	§12.121	<input type="checkbox"/>
Ownership and Control	§12.116	<input type="checkbox"/>	Cultural Resources	§§12.125(2), 12.151	<input type="checkbox"/>
Insurance	§12.120	<input type="checkbox"/>			

Environmental Resources:

Geology/Overburden Data	§12.127	<input type="checkbox"/>	Soils	§12.134	<input type="checkbox"/>
Ground Water	§§12.128, 12.130	<input type="checkbox"/>	Land Use	§12.135	<input type="checkbox"/>
Surface Water	§§12.129, 12.130	<input type="checkbox"/>	Map/Sections/Plans	§§12.136, 12.137	<input type="checkbox"/>
Vegetation	§12.132	<input type="checkbox"/>	Prime Farmland	§12.138	<input type="checkbox"/>
Fish and Wildlife Resources	§12.133	<input type="checkbox"/>			

Operation Plan:

Mine Plan	§12.139	<input checked="" type="checkbox"/>	Maps and Plans	§12.142	<input type="checkbox"/>
Blasting	§12.141	<input type="checkbox"/>	Air Pollution Control Plan	§12.143	<input type="checkbox"/>

Reclamation Plan:

Fish & Wildlife Plan	§12.144	<input type="checkbox"/>	Ponds	§12.148	
Reclamation Timetable	§12.145(b)(1)	<input type="checkbox"/>	Temporary Impoundment		<input type="checkbox"/>
Reclamation Cost Estimate	§12.145(b)(2)	<input type="checkbox"/>	Temporary Sediment Pond		<input type="checkbox"/>
Backfilling and Grading	§12.145(b)(3)	<input type="checkbox"/>	Permanent Sediment Pond		<input type="checkbox"/>
Topsoil Handling	§12.145(b)(4)	<input type="checkbox"/>	Permanent Impoundment		<input type="checkbox"/>
Revegetation Plan	§12.145(b)(5)(A-F)	<input type="checkbox"/>	Fresh Water Diversion		<input type="checkbox"/>
Soil Monitoring Plan	§12.145(b)(5)(G)	<input type="checkbox"/>	Disturbed Water Diversion		<input type="checkbox"/>
Conservation of Coal	§12.145(b)(6)	<input type="checkbox"/>	Mining Near Underground Mining	§12.149	<input type="checkbox"/>
AFM/TFM Handling Plan	§12.145(b)(7)	<input type="checkbox"/>	Stream Diversions	§12.150	<input type="checkbox"/>
Well/Hole Plugging	§12.145(b)(8)	<input type="checkbox"/>	Relocation/Closure of Public Roads	§12.152	<input type="checkbox"/>
Hydrologic Reclamation Plan	§12.146(a)	<input type="checkbox"/>	Road Systems	§12.154	
Long-Term Ground-Water Monitoring	§12.146(b)	<input type="checkbox"/>	Temporary Ancillary Road		<input type="checkbox"/>
Long-Term Surface-Water Monitoring	§12.146(c)	<input type="checkbox"/>	Temporary Primary Road		<input type="checkbox"/>
Probable Hydrologic Consequences	§12.146(d)	<input type="checkbox"/>	Permanent Primary Road		<input type="checkbox"/>
Postmine Land Use	§12.147	<input checked="" type="checkbox"/>			

LUMINANT MINING COMPANY LLC
MONTICELLO-THERMO MINE, PERMIT No. 5G
REVISION APPLICATION No. 34

August 1, 2017

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Surface Mining Division

Introduction:	Discussion of Revision Application No. 34
SMRD-1C:	Updated address and names
Verification of Application:	
Section (s):	This section contains revised and/or added information
	Section .139
	Revised pages 139-2 and 139-3
	Revised Table 139(a)-1
	Revised Table 139(b)-3
	Revised Plate 139-2-1
	Revised Plate 139-3-1
	<u>Added Appendix 139-E</u>
	Added pages 139-E-1 and 139-E-2
	Added Figure 139-E-1
	Added Tables 139-E-1 and 139-E-2
	Section .147
	Revised Tables 147-1 and 147-2
	Revised Plate 147-1

LUMINANT MINING COMPANY LLC
MONTICELLO-THERMO MINE, PERMIT No. 5G
REVISION APPLICATION No. 34

August 1, 2017

INTRODUCTION

Revision Application No. 34 is being provided to the Commission seeking approval for a comprehensive reclamation plan (added Appendix 139-E) for the H-Area within the Monticello-Thermo Mine. This reclamation plan includes updated post mine slopes and updated post mine contours.

Also, an updated Form SMRD-1C is provided to reflect Luminant's new mailing address and names of individuals who are authorized to act on behalf of the applicant.

The material contained within this document is fashioned similar to the approved permit application and where possible, revised and/or added material is labeled as "Revision No. 34" and should be replaced and/or added as noted in the Table of Contents of this document.

RAILROAD COMMISSION OF TEXAS
SURFACE MINING AND RECLAMATION DIVISION

Application for Surface Mining Operation

General Instructions:

This application form, SMRD-1C, requires the use of the "Surface Coal Mining and Reclamation Act of 1979" and the "Rules of the Surface Mining and Reclamation Division," Railroad Commission of Texas, in order to fully understand the application requirements. All information requested in the application should be regarded as the minimum required. The application should contain any other information which is pertinent to the situation or setting. Where required in the permit application, the applicant should consult, prior to application submission, with appropriate representatives of the Surface Mining and Reclamation Division for the purpose of determining, on a site-specific basis, what additional information will be required. Further information may be requested by the Director of the Surface Mining and Reclamation Division.

Please submit your application on legal size paper. Other information on format, general information on maps and drawings, and other general requirements may be found in Rule 107. Sections applicable to the given item are referenced on the application form.

Where physical properties of materials are requested, the data should be oriented to the setting in which it will be used, i.e., agronomic, geologic, or engineering. Where chemical properties are requested, the following minimum data should be supplied:

I. Ground Water

- A. Obtain at least two samples from each usable aquifer affected by mining as near the immediate area of mining activity as possible. Preferably, the wells should be cased and cemented. Standard methods of water analysis, such as those referenced in Appendix A, should be utilized. (If toxic material is present in such concentration as to cause concern, additional representative samples may be requested.)
- B. General Parameters -- temperature, pH, arsenic, calcium, magnesium, sodium, potassium, bicarbonate, sulfate, chloride, fluoride, nitrate, total dissolved solids, cation-anion balance.
- C. Metals -- aluminum, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, and zinc.

II. Surface Water: SEE Rule 129

- III. Overburden:** A minimum of one test boring or core sample per proposed mining area, but not less than one test boring or core sample per 500 acres, shall be submitted. The aforementioned minimum test hole spacing requirements may be waived if the applicant can demonstrate that the overburden within the mining area is stratigraphically similar with respect to lithologic and depositional facies.

A. Objective

1. Characterize the overburden as a plant growth medium for reclamation purposes.
2. Determine the total concentration of selected trace elements in the overburden and the potential effect, if any, on ground water.

B. Selection of Cores

1. Cores to be used for chemical and physical analyses should be representative of the depositional environment and overburden lithology of the area(s) to be mined.
2. The lithologic units to be analyzed shall be selected based on rock type, texture, chroma, lithology, thickness and depositional environment.
3. Description of the rock type, texture, lithology, thickness and depositional environment shall be determined by a geologist using an accepted classification system.
4. All lignite/coal rider seams, thin seams, carbonaceous shales, and/or unmineable seams shall be sampled separately and included as part of the overburden analysis.
5. Chroma shall be determined using a Munsell color chart.
6. All mineable seams shall be sampled and the required analyses are described in Section IV.
7. See the references on selection of overburden in Appendix A.

C. Collection

Cores should be collected, sampled, logged and labeled in the field under the direction of a geologist. Methods of core collection should be used which will maximize core recovery and provide representative samples of the complete overburden lithology.

D. Chemical Analysis

The analytical procedures listed are intended to standardize the analyses of overburden materials. The Technical Services staff of the Surface Mining and Reclamation Division recognizes that other procedures are currently being utilized and new procedures are being developed. If the applicant proposes to use a different procedure or a modification of the procedures listed, they must obtain written approval from the Director of the Surface Mining and Reclamation Division.

1. Chemical analyses of each sample shall be performed on the 2mm size fraction. The sample may be ground if sufficient material of 2mm size is not available for analysis. The procedure used to grind the sample should be indicated.
2. Saturated paste or a 1:1 extract shall be used to determine pH, salinity (EC), Ca, Mg, Na, K, HCO_3 , CO_3 , Cl , SO_4 . Analysis should be performed on each sample as received from the field. Procedure reference--Black, C.A., 1965, pages 933-936 or USDA Handbook 60.
3. Cation exchange capacity (CEC in milliequivalents/100 grams of material) should be determined on each sample using either ammonium acetate (NH_4OAC) or sodium acetate (NaOAC). In distinctly acid overburden (pH 4.2), the summation of the exchangeable

hydrogen (exchange acidity) shall be used. Procedure reference--Black, C.A., 1965, page 891. Specify the method used.

4. Total Exchangeable Bases: Percent base saturation should be determined for each sample, with the exception of the lignite/coal rider seam(s). Procedure reference--Black, C.A., 1965, page 902.
5. Acid-base accounting consists of measuring total or pyritic sulfur and neutralization potential as CaCO_3 equivalent on each sample. Procedure references--Sobek et al, 1978; Smith et al, 1974; ASTM Method D-2492. Acid-base accounting can also be determined by oxidizing a composite sample of the entire overburden core. See Brown, K.W., and L. E. Deuel, February 1977.
6. Trace element analyses should be performed for each sample including lignite/coal rider seams. Samples should be tested as received from the field.
 - (a) Since the objective is to determine the total concentration of each element in the element in the sample, either a $\text{HNO}_3\text{-HC10}_4$ or HF extraction procedure should be used for the following trace elements:
 - (1) Cadmium -- atomic absorption (direct aspiration or furnace). EPA method 213.1 or 213.2, March 1979.
 - (2) Copper -- atomic absorption (direct aspiration or furnace). EPA method 220.1 or 220.2, March 1979.
 - (3) Chromium -- atomic absorption (direct aspiration or furnace). EPA method 218.1 or 218.2, March 1979.
 - (4) Lead -- atomic absorption (direct aspiration or furnace). EPA method 239.1 or 239.2, March 1979.
 - (5) Manganese -- atomic absorption (direct aspiration or furnace). EPA method 243.1 or 243.2, March 1979
 - (6) Molybdenum -- atomic absorption (direct aspiration or furnace). EPA method 246.1 or 246.2, March 1979.
 - (7) Zinc -- atomic absorption (direct aspiration or furnace). EPA method 289.1 or 289.2, March 1979.
 - (b.) The following trace element concentrations should be determined using the designated procedure utilized for each element analysis.;
 - (1) Arsenic
 - i. atomic absorption - gaseous hydride to determine both inorganic or organic forms. EPA methods 206.2 and 206.3, March 1979.
 - ii. Leiderman, D., Analytical Chemistry, Volume 31: 2052-2054, 1959.
 - (2) Selenium
 - i. atomic absorption hydride generator and deuterium background corrector. EPA method 270.3, March 1979.
 - ii. Black, C.A., 1965, page 1117.
 - (3) Boron
 - i. colorimetric (curcumin). EPA method 212.3, March 1979.
 - ii. colorimetric, Black, C.A., 1965 pages 949 and 1059.

E. Physical

1. Texture (particle size distribution) should be determined on each sample as received from the field. The analyses procedures are outlined in either Black, C.A., 1965, page 545, or ASTM. Specify whether the texture was determined by sieve analysis, hydrometer or pipette.
2. Water holding capacity can be expressed as either field capacity or the percent held between 1/3 bar and 15 bar soil moisture tension. Water holding capacity should be determined on each sample using the procedures outlined in Black, C.A., 1965 page 280.

IV. Lignite/coal

The following chemical parameters should be determined for each mineable seam.

- A. Total concentrations for the following trace elements should be determined for each seam using $\text{HNO}_3\text{-HC10}_4$ or HF digestion procedures (ASTM D36-82-78, D36-83-78, and D36-84-78): arsenic, beryllium, boron, cadmium, chromium, copper, lead, manganese, molybdenum, mercury, nickel, selenium, vanadium, and zinc.
- B. The pH should be determined on a representative sample as outlined in 1975 ASTM procedures for coal/lignite analysis.
- C. Total pyritic, organic, and sulfate sulfur content should be determined as outlined in 1975 ASTM procedures.
- D. Total uranium as outlined by Francois, C.A., Rapid Spectrophotometric Determination of Submilligram Quantities of Uranium. Analytical Chemistry, Volume 30: 1-50, 1958 and Centanni, F.A., A. M. Ross, and M. A. DeSesa, 1956. Fluorometric Determination of Uranium. Analytical Chemistry, Volume 28:11, pages 1651-1657.

**RAILROAD COMMISSION OF TEXAS
SURFACE MINING AND RECLAMATION DIVISION**

Application for Coal Mining Operations Permit

All items should be as complete as possible. Please submit your application on standard size paper. File seven (7) complete copies with the Director of the Surface Mining and Reclamation Division. See "Rules of the Surface Mining and Reclamation Division" and "Texas Surface Coal Mining and Reclamation Act" for information.

I. General Information

A. Name

1. Name of applicant: Luminant Mining Company LLC
Name of mining operation: Monticello-Thermo Mine, Permit No. 5G
Permanent mailing address: 6555 Sierra Drive

Street or P.O. Box

Irving
City

TX
State

75039
Zip Code

Telephone: 214-875-9090

2. Name, address, and telephone number of person or persons authorized to act for applicant during consideration of this application (attorneys, engineering firms, applicant's mining superintendent, etc.)

**Kimberly Mireles, Sr. Director, Environmental
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-8382

**Sid Stroud, Environmental Manager
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-9129

**Scott Mills, Environmental Manager
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-9090

**Gary Spicer, Environmental Manager
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-8299

**Demetrie Penson, Permit Coordinator
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-8964

**Peter Okonski, Sr. Environmental Specialist
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-8141

**Araceli Fernandez, Engineer
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-8956

**Justin Ewing, Sr. Environmental Specialist
Vistra Corporate Services Company
6555 Sierra Drive, Irving, Texas 75039**

Phone: 214/875-9130

3. Name, address, and telephone number of ownership and management officers of the permit applicant and affiliated persons engaged in surface mining.

- B. Type of permit application: ☐ Regular Original ☒ Revision Renewal
C. Product to be mined: ☐ Coal ☒ Lignite
D. Type of mining operation ☐ Open-pit mining ☒ Strip mining ☐ Underground mining

E: Location

1. County or counties

Hopkins

2. Give a general description of the location of the proposed mining area with respect to cities, streets, highways, churches, schools, water courses, landmarks, etc.

The Monticello-Thermo Mine, Permit 5G, is located approximately three miles southeast of the town of Sulphur Springs, Texas. The permit boundary follows State Highway No. 11 from the intersection of FM 1870 westward to the intersection of Hopkins County Road No. 2309 where it meanders westward along property tract boundaries to a point near the intersection of State Highway No. 11 and County Road No. 2307. The boundary then generally follows County Road No. 2307 northward for approximately 0.7 mile where it turns and runs southwestward until it intersects State Highway No. 11. The line then generally follows State Highway No. 11 northwestward approximately 0.7 mile where it turns north and then eastward before dropping southward to intersect CR 2307. The boundary then moves northeastward to again intersect CR 2309. It then follows CR 2309 northward to intersect the Louisiana-Arkansas Railroad where it follows the railroad's southern right-of-way eastward to a point approximately one mile past the intersection of FM 1870. The boundary then drops southward for approximately 0.7 miles and then moves westward to again intersect FM 1870 where it follows FM 1870 southward to State Highway No. 11.

II. Administrative Information

A. Interested persons (Rule 116). Give name and address of:

1. Every owner of record of property to be mined.
2. Leaseholders of record.
3. Real estate contract holders of record.
4. Owners of record of all surface and subsurface areas contiguous to application area.
5. Operator, if different from owner, for application area.
6. Resident agent and telephone number.

B. Applicant's Organization (Rule 116). Provide:

1. A statement of organization: single proprietorship, corporation, etc.
2. If other than single proprietorship:
 - (a) Name and address of any person functioning like a director of the applicant.
 - (b) Name and address of any principal shareholder.
 - (c) Names under which the applicant operated surface coal mines in the U.S. in the previous five years.
 - (d) Name and address of their principal officers and resident agent.
3. A list of current or previous coal mining permits held in U.S. since 1970 by applicant and by principal shareholders and authority issuing the permit.
4. If it exists, the Mining Safety and Health Administration identification number.
5. A statement of lands contiguous to application area in which the applicant is interested.

C. Compliance History (Rule 116). Provide:

1. A statement of:
 - (a) Suspended or revoked permits in the last five years for applicant or person controlled by or with applicant.
 - (b) Any forfeited bond on security.
2. For any of the above include:

- (a) Identification of the permit issued, date and amount of bond.
 - (b) Identification of authority taking action.
 - (c) Current status of situation causing suspension or revocation.
 - (d) Date, location and type of any administrative or judicial proceeding.
 - (e) Status of proceeding.
3. A list of violations for the past three years for applicant or persons controlled by or with applicant. Include violations of mining and environmental statutes, rules, regulations -- state or federal.

Details should include:

- (a) Date and identification of authority.
 - (b) Description of violation.
 - (c) Descriptions of administration of judicial proceedings.
 - (d) Status of proceedings.
 - (e) Abatement action taken by applicant.
- D. Right to Mine (Rule 117 and 118).
1. Provide descriptions and/or copies of all documents conveying rights (surface and subsurface) to enter and mine including consent of surface owners or authority under state law to extract coal at the site.
 2. Designate on a map areas designated as unsuitable for mining.
 3. Provide statement regarding Lands Unsuitable as designated procedurally under Subchapter F or under study or exemptions under Rule 216.
 4. Provide waivers from dwelling owners within 300 feet of the mining area.
- E. Permit tenure and sequences (Rule 119). Provide
1. Size, sequence and timing for each phase of mining and number of acres affected for the life of the permit. (Attach map)
 2. If application is for greater time than five years, additional information relating to financing and operations for the longer period.
- F. Certificate of liability or self-insurance (Rule 120).
- G. Other licenses and permits required (Rule 121). Include:
1. Issuing authority
 2. Status
 3. Identification number if issued.
- H. Locations where application may be reviewed by the public (Rule 122).
- I. Copies of published notice and proof of publication when available. (Rule 123).

III. Environmental Resources Information - Premining (PART 779 and Rule 107).

Provide:

- A. Archeological survey. (Rule 125)
 - B. Analysis of geological and hydrological resources. (See Rules 126-130) Where applicable, the applicant may request that the Surface Mining and Reclamation Division provide environmental resource information, to the extent that it is available from an appropriate Federal or State agency. The request shall be in writing.
 - C. Climatological information. (Rule 131)
 - D. Vegetative cover. (Rule 132)
 - E. Fish and wildlife resources. (Rule 133)
 - F. Soils resources. (Rule 134)
 - G. Land use information. (Rule 135)
 - H. Maps, plans and cross-sections. (Rules 136 and 137)
 - I. Prime farmland investigation. (Rule 138)
- IV. **Mining Plan** (See Rule 107 for format and general requirements, subchapter K and Rules 139 through 144). Provide narrative including:
- A. Mining procedures.
 - B. Engineering techniques.
 - C. Equipment to be used.
 - D. Production rates.
 - E. Operation plan including design and handling of the following new facilities:
 - 1. Dams, embankments, and impoundments
 - 2. Storage areas (noncoal)
 - 3. Coal handling
 - 4. Waste handling and disposal
 - 5. Mine
 - 6. Air pollution control (Rule 143, if applicable)
 - F. Existing facilities use, modification, destruction and environmental plan. (Rule 140)
 - G. Blasting plan. (Rule 141)
 - H. Fish and wildlife plan. (Rule 144)

V. Reclamation Plan (See Rule 107 for format and general requirements and Rules 145 through 154).

A. Demonstrate compliance with environmental standards. Include:

1. Timetable for each step in reclamation plan.
2. Detailed cost of reclamation.
3. Plans and maps for soil handling and final disposition.
4. Revegetation plan.
5. Plan for maximization and conservation of coal resource.
6. Plan for handling and disposal of waste, toxic and fire hazard material, contingency plan to preclude sustained combustion.
7. Maps, cross-sections, and narrative for sealing or managing wells and openings.

B. Demonstrate compliance with air and water quality laws and regulations, and health and safety standards.

C. Reclamation Plan should emphasize:

1. Protection of the hydrologic balance.
2. Post mining land use.
3. Design, operation and final disposition of ponds, impoundments, banks, dams and embankments.
4. Surface mining near underground mining.
5. Maps and cross-sections of stream and channel diversions.
6. Protection of public and historic facilities.
7. Spoil disposal.
8. Design, handling and final disposition of transportation facilities.

I, (name) Kimberly Mireles, (title) Sr. Director, state that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any law, rule ordinance, or decree of any duly authorized governmental entity having jurisdiction.

Date: July 31, 2017 Signature: Kimberly Mireles

Before me, a Notary Public, on this day personally appeared Kimberly Mireles known to me to be the person whose name is subscribed to the foregoing instrument.

Given under my hand and seal of office this 31st day of July, A.D. 2017.

Tish Goodspeed
Tish Goodspeed
Notary Public, State of Texas,
Commission Expires 08/23/2017



APPENDIX A

Water Analysis References:

- American Public Health Association, American Water Works Association and Water Pollution Control Federation, Standard Methods for the Examination of Water and Wastewater, 14th Edition: New York, American Public Health Association, 1975.
- American Society for Testing and Materials, "Water and Atmospheric Analysis", Annual Book of ASTM Standards, Part 23, Philadelphia, American Society Testing Material, 1975.
- Brown, Eugene, M. W. Skougstad, and M. J. Fishman, Methods for Collection and Analysis of Water Samples for Dissolved Minerals and Gases: Techniques of Water Resources Investigations of the U.S. Geological Survey, Book 5 Chapter A-1, Washington, D.C., Superintendent of Documents, U.S. Printing Office, 1970.
- Environmental Protection Agency, Methods for Chemical Analysis of Water and Wastes, Environmental Monitoring and Support Laboratory, Office of Research and Development, Cincinnati, Ohio, (EPA-600/4-79-020), 1979.

Soil Analysis References:

- Black, C.A., (editor), "Part I: Physical and Mineralogical Properties", "Part II: Chemical and Microbiological Properties", Methods of Soil Analysis, American Society of Agronomy and American Society for Testing and Materials, Agronomy Series Number 9.
- Brown, K.W. and L. E. Deuel, "Final Report: The Suitability of Overburden as a Medium for Plant Growth and Growth and Characteristics of existing Soils at the Proposed Mine Area in Grimes County", Texas A&M Research Foundation and Texas Agricultural Experiment Station, Department of Soil & Crop Sciences, College Station, Texas February 1977.
- Sobek, A.A., et al, "Field and Laboratory Methods Applicable to Overburdens and Minesoils", USEPA (600/2-78/054-NTIS PB 280 495), Industrial Environmental Research Laboratory, Cincinnati, Ohio, 1978
- USDA, "Diagnosis and Improvement of Saline and Alkali Soils", Agricultural Handbook No. 60, U.S. Government Printing Office, Washington, D.C., 1969.
- USDA - Soil Conservation Service, "Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples", U.S. Government Printing Office, Washington, D.C. 20402, (0107-0298), 1972.

VERIFICATION OF APPLICATION

I, Scott Mills, Environmental Manager - Permitting, state that I have knowledge of the facts herein set forth, including those contained within the document titled Thermo Mine, Permit No. 5G, Revision Application No. 34, dated August 1, 2017, and that same are true and correct to the best of my information and belief.

Dated this 31st day of July, 2017.

Scott Mills
Scott Mills

Before me, a Notary Public, on this day personally appeared Scott Mills, known to me to be the person whose name is subscribed to the foregoing instrument.

Given under my hand and seal of office this 31st day of July, 2017.

Tish Goodspeed
Tish Goodspeed
Notary Public, State of Texas
Expires 08/23/2017



SECTION .139 - OPERATION PLAN

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TABLE 139(a)-1

SLOPE COMPARISON TABLE

Renewal & Expansion Slope Categories %	Pre-mine <u>Study Area</u>		Post-mine <u>Study Area</u>	
	Area	% of Total	Area	% of Total
	(Acres)	Area	(Acres)	Area
0 - 5 %	3631	80.6%	3559	79.0%
5 - 10 %	748	16.6%	642	14.2%
10 - 15 %	100	2.2%	194	4.3%
Over 15 %	27	0.6%	111	2.5%
TOTAL	4506	100.0%	4506	100.0%

Slope Comparison Table

The comparison of premine and postmine slopes is based on the relative accuracy of the pre- and postmine contour maps. The accuracy of these maps complies with the National Map Standards for 1"=400' topographic with five (5) foot contours. Therefore, a variation of up to one-half of the difference in the contour interval may exist for a given location on these maps.

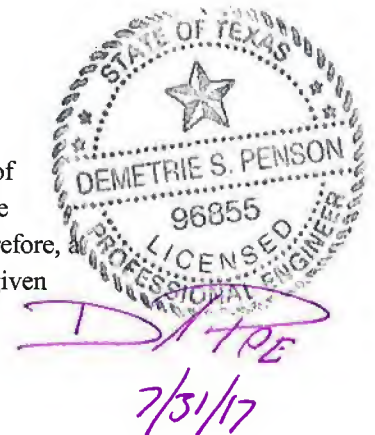


TABLE 139(b)-3

PERMANENT IMPOUNDMENT SCHEDULE

Impoundment	Estimated Drainage Area (Ac)	Estimated Volume (Ac-Ft)	Estimated Surface Area (Ac)	Approx. Submittal Date	RCT Approval Date
* A-01	49.31	40.7	4.55	Existing	09/12/88
* A-02	3151.0	49.8	9.20	Existing	11/02/88
* A-05	3301.0	19.7	2.92	Existing	06/28/99
* A-08	16.3	11.9	2.70	Existing	11/02/88
* A-17	218.2	143.5	7.43	Existing	09/12/88
* A-18	776.1	399.0	15.10	2020	Proposed
* B-15	420.3	216.6	11.00	Existing	02/07/89
* B-17 REANALYSIS NO. 2	1394.9	481.4	34.00	Existing	06/21/12
* B-18	878.0	248.0	12.10	Existing	02/07/89
* C-04	139.0	15.2	3.25	2020	Proposed
* C-05	706.0	165.4	8.90	2020	Proposed
* C-06	1027.8	325.9	14.00	2020	Proposed
* C-07A	953.0	3.3	1.80	Existing	01/08/99
* D-02	971.4	90.5	9.82	Existing	01/04/07
* D-03	520.9	537.0	35.50	Existing	08/04/06
* E-01	95.5	1.8	1.22	Existing	06/08/93
* E-02	241.3	28.9	2.30	Existing	03/30/02
* E-03	202.1	96.0	11.46	Existing	05/23/05
* E-04	170.0	184.0	9.40	Existing	07/09/96
* E-05	23.8	1.0	1.90	Existing	10/31/95
* E-06	594.1	78.6	12.19	Existing	12/05/06
* E-07	165.0	138.5	9.32	Existing	12/12/03
* F-03 REANALYSIS NO. 1	375.8	36.3	7.04	Existing	05/19/15
F-05	265.0	198.0	13.10	Existing	05/19/15
F-06	8.1	0.1	0.11	2017	Proposed
F-12	196.9	113.9	11.10	Existing	05/19/15
G-13	862.1	2430.1	56.90	Existing	08/13/14
H-01	401	71.2	5.80	2020	Proposed
H-01 TREATMENT POND	5.5	19.8	3.30	2020	Proposed
H-03	198.6	450.0	18.86	2019	Proposed
* H-05	38.64	15.4	2.35	Existing	04/15/13
F-04	Removed From Reclamation Plan				
F-11	Removed From Reclamation Plan				
G-01	Removed From Reclamation Plan				
G-03	Removed From Reclamation Plan				
G-04	Removed From Reclamation Plan				
G-06	Removed From Reclamation Plan				
G-07	Removed From Reclamation Plan				
G-08	Removed From Reclamation Plan				
G-09	Removed From Reclamation Plan				
G-10	Removed From Reclamation Plan				
G-11	Removed From Reclamation Plan				
G-12	Removed From Reclamation Plan				
H-02	Removed From Reclamation Plan				
H-04	Removed From Reclamation Plan				
H-06	Removed From Reclamation Plan				

* Existing approved permanent impoundment.



APPENDIX

E

MONTICELLO-THERMO MINE, PERMIT NO. 5G H-AREA RECLAMATION PLAN

Introduction:

Luminant Mining Company LLC proposes to utilize the following reclamation plan to complete leveling and reclamation activities in the H-Area of the Monticello-Thermo Mine. Activities associated with the reclamation plan will begin on June 1, 2018 and will be complete by March 1, 2019. The plan utilizes four suitable overburden stockpiles and two suitable material borrow areas to complete the subgrade and the top four feet of the leveled reclamation areas.

Reclamation Schedule:

The reclamation of the H-Area of the Monticello-Thermo Mine will be completed in three zones. Details regarding the activities to occur in these zones are described below and shown on Table 139 E(T)-1. This zone is depicted on Figure E-1 of this application.

H-Area Suitable Material Stockpile No. 1 and 2

H-Area Suitable Material Stockpile No. 1 and 2 serve as the storage area for the material suitable to be placed in the top four feet of reclamation. The storage areas have a maximum storage capacity of 318,000 and 430,000 lcy, respectively. Once backfilling & grading and suitable material placement activities in Zone 1 are complete, dozers equipped with rippers in combination with disking equipment will be used to loosen the remaining material in the suitable layer below the stockpile locations.

The material that will remain after the appropriate volume of suitable material has been transported to Zone 1 is categorized as material suitable for the top four feet of reclamation.

Zone 1 Subgrade Backfilling & Grading

Work on Zone 1 subgrade will begin on June 1, 2018. Mobile equipment will move approximately, 750,000 cubic yards of material in Zone 1 in 183 days. Based on a productivity rate of 171 lcy/hr, Zone 1 subgrade will be complete by December 1, 2018.

Zone 1 Suitable Material Placement

Suitable material placement in Zone 1 will begin on October 1, 2018 and will last 151 days from commencement. Mobile equipment will move approximately 36,200 and 69,600 cubic yards of suitable material from Zone 2 and Zone 3 respectively, to be placed in the top four feet of Zone 1. Based on a productivity rate of 10 lcy/hr and 19 lcy/hr, this reclamation activity is projected to be completed on March 1, 2019.

In addition to the previous activity, 326,600 cubic yards will be recovered from H-Area Suitable Material Stockpile No. 1 and 87,300 from H-Area Suitable Material Stockpile No. 2 and placed in the top four feet of Zone 1. Based on a productivity rate of 90 lcy/hr and 24 lcy respectively, this

reclamation activity will last 151 days and is projected to be completed on March 1, 2019.

Zone 2 Suitable Material Leveling

As previously mentioned, approximately 36,200 cubic yards of suitable material will be hauled from Zone 2 to Zone 1. Dozers will level the suitable material as it is delivered to Zone 1 in order to establish the postmine topography in Zone 1. The leveling of Zone 2 will be completed at a productivity rate of 10 lcy/hr. Based on the aforementioned productivity rates, final grading will be completed in 151 days of commencement and is projected to be complete by March 1, 2019.

The material that will remain in the top four feet of Zone 2 is categorized as suitable material in an affected area that was not mined during the progression of the active pit.

Zone 3 Suitable Material Leveling

Approximately 69,600 cubic yards of suitable material will be hauled from Zone 3 to Zone 1. Dozers will level the suitable material as it is delivered to Zone 1 in order to establish the postmine topography. The leveling of Zone 3 will be completed at a productivity rate of 19 lcy/hr. Based on the aforementioned productivity rates, final grading will be completed in 151 days of commencement and is projected to be complete by March 1, 2019.

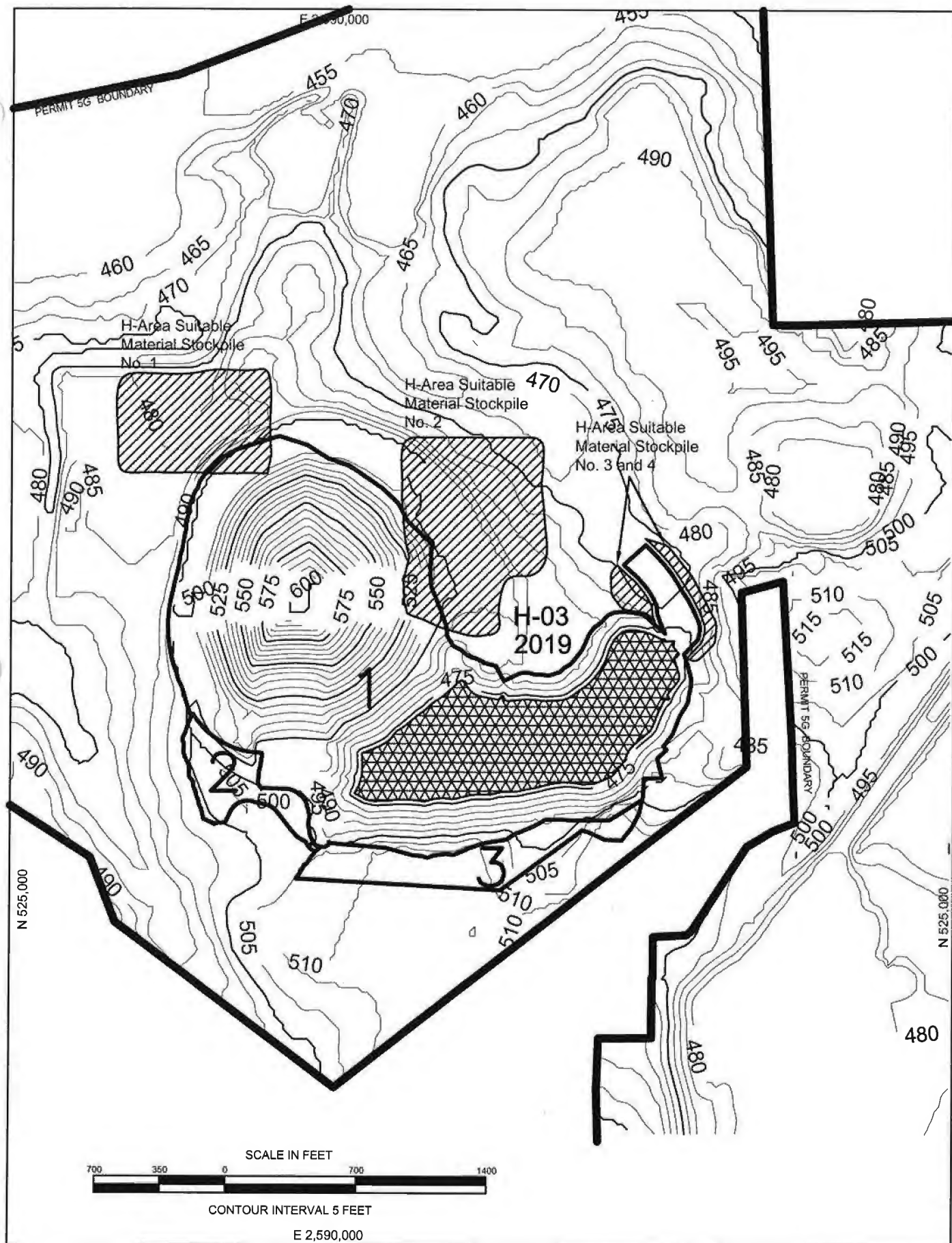
The material that will remain in the top four feet of Zone 2 is categorized as suitable material in an affected area that was not mined during the progression of the active pit.

H-03 Pond

The H-03 Pond is the permanent impoundment scheduled to be constructed in the H-Area of the Thermo Mine. During construction of the spillway, Luminant will develop H-Area Stockpile No. 3 and 4 to contain suitable material recovered from the proposed spillway location. Detailed design plans for this pond is scheduled for submittal to the Railroad Commission of Texas by May 1, 2019. The proposed submittal date will provide Luminant adequate time to recover survey information from the completed backfilling and grading and incorporate the information into the detailed design plans. After approval of the detail design plans and completion of the subgrade and suitable material leveling of each zone of the H-Area Reclamation Plan, Luminant will begin the construction of the inlet and outlet features of the aforementioned pond.

Once final backfilling and grading is complete, each zone will be planted with permanent vegetation during the first normal period of favorable planting conditions. All disturbed runoff from the H-Area will continue to be routed to the H-01 Sedimentation Pond prior to release from surface water control.

All dirt volumes and dates of completion for each area are approximate and may fluctuate somewhat due to unanticipated weather delays, lignite production changes, and power plant demand fluctuations. If changes to the reclamation time schedule are necessary, a request will be submitted to the Commission.



PERMIT NO. 5G
REVISION NO. 34

139-E-3

FIGURE E-1
THERMO MINE
H-AREA RECLAMATION PLAN
LUMINANT MINING COMPANY LLC

**Table 139 E-1
Thermo H-Area Reclamation Plan**

Zone	Task	Activity	Req'd Equipment Productivity (lcy/hr)	Material Quantity (cy)	Source of Material	Activity Time Frame (days)	Anticipated Completion Date	Estimated Haul Distance (feet)
1	Reclamation	Subgrade Haul/Leveling	171	750,000	Zone 1	183	12/1/2018	1,200
1	Reclamation	Suitable Material Haul/Leveling	90	326,600	H-Area Stockpile No. 1	151	3/1/2019	1,700
		Suitable Material Haul/Leveling	24	87,300	H-Area Stockpile No. 2	151	3/1/2019	1,000
		Suitable Material Haul/Leveling	10	36,200	Zone 2	151	3/1/2019	900
		Suitable Material Haul/Leveling	19	69,600	Zone 3	151	3/1/2019	1,600
2	Reclamation	Suitable Material Removal/Leveling	10	36,200	N/A	151	3/1/2019	900
3	Reclamation	Suitable Material Removal/Leveling	19	69,600	N/A	151	3/1/2019	1,600
	Design	H-03 Pond Design	N/A	N/A	N/A	60	5/1/2019	N/A

Equipment Information

NOTE: All dirt volumes and dates of completion for each area are approximate and may fluctuate somewhat due to unanticipated weather delays, lignite production changes, and power plant demand fluctuations. If changes to the reclamation time schedule are necessary, a request will be submitted to the Commission.

**Table 139 E-2
H-Area Suitable Material Availability**

Zone (acres)	Recoverable Suitable Material (cu-yds)	Required Suitable Material (cu-yds)
1 (73.9 acres)	36,900	512,669
2 (4.3 acres)	66,031	29,831
3 (7.1 acres)	118,855	49,255
H-Area SP 1 (9.1 acres)	379,330	63,130
H-Area SP 2 (14.3 acres)	178,204	99,204
Totals	779,319	654,884

Additional Information

- 1) Required suitable material for reclamation assumes 4.3-ft of suitable material will be placed on backfilled and graded subgrade reclamation.

TABLE 147-1

**POSTMINE LAND USES
THERMO MINE, PERMIT 5G
REVISION NO. 34**

Land Uses	Pre-Permit Term and Disturbance In Support of Mining	%	Permit Term Mining Disturbance	%	Composite Acres	%
Pastureland	2,072	58	327	53	2,399	57
Fish & Wildlife Habitat	675	19	96	16	771	18
Forestry	485	13	93	15	578	14
Developed Water Resources	248	7	83	13	331	8
Industrial Commercial	111	3	20	3	131	3
Residential	0	0	0	0	0	0
Undeveloped	1	<1	0	0	1	<1
Cropland	0	0	0	0	0	0
Total	3,592		619		4,211	



Leased Tract Pre Mine Land Use Acreage
(This acreage is included in Table 147-1)

Permit No. 5G
Revision No. 34

TABLE 147-2
Pre-Mine Land Use on Leased Tracts

Tract Number	Undeveloped	Water	Pasture	Residential	Forest	Industrial Commercial
157			0.41			
158	0.51		1.28			